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UNIVERSITY OF ALBERTA

# CHANGING THE HIGH SCHOOL GRADUATION REQUIREMENTS IN ALBERTA:
## A POLICY IMPLEMENTATION CASE STUDY

BY

© SHARON R. V. PISESKY

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

EDMONTON, ALBERTA
SPRING, 1992

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SHARON R. V. PISESKY

PERMANENT ADDRESS:
11424 32 Avenue
Edmonton, Alberta
T6J 3H5

DATE: april 22/92

UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled "Changing the High School Graduation Requirements in Alberta: A Policy Implementation Case Study" submitted by SHARON R. V. PISESKY in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Dave Kay

D. A. MacKay, Supervisor

Thomas Kieren

T. Kieren

Linda LaRocque

L. J. LaRocque

R. G. McIntosh

R. G. McIntosh

K L Ward

K. L. Ward

per Donald M. Richards

J. H. Fasano

Date: April 13, 1992

## DEDICATION

This work is dedicated with great love and appreciation
to four women,
two of whom have preceded me and two of whom will succeed me:

Katherine Nikiforuk
(1895-1984)
my maternal grandmother
who taught me that the word "can't" doesn't exist
and that everything is possible if you are prepared to work for it;

Elswet Yurchuk
(1919-1965)
my mother
who taught me about effective management strategies
and was my model of love, courage, and patience;

and

Leann and Katherine Pisesky
my daughters,
in the hope that
they will be challenged to uphold these virtues and values,
and that they will
cherish learning as the most important investment
they can make in themselves.

# ABSTRACT

The purpose of this study was to examine the implementation of the new graduation requirements as a policy initiative of the *Secondary Education in Alberta* (Government of Alberta, 1985) policy. First, the study examined the macro level of policy development; i.e., how the administering agency, Alberta Education, transformed the secondary policy into the action plan that became the new high school graduation requirements. Second, the study investigated implementation actions at the macro, micro, and intermediate levels as they evolved at the school, district, department, and community levels from the perspectives of stakeholders involved in the process.

This study found that, from an administrative perspective, the graduation requirements were being implemented at the school level. Educational stakeholders in this study accepted the role of subordinates in the policy process and acted as they were expected to act by following the requirements of the regulations. The school district, unable to influence the structure of the new graduation requirements, did not develop a commitment to changes it did not support. Although the district acknowledged the need to comply with the new regulations and required schools to implement the changes, there was no evidence of leadership or proactive support. Likewise, at the school level, the key actors simply went through the implementation motions without much commitment to the change. Students simply accepted the changes, while about two-thirds of their parents were not even aware that the graduation requirements had been changed.

As the implementation proceeded exogenous stakeholder groups not under the direct authority of Alberta Education challenged some of the changes. The science community lobbied against the proposed science program and forced the Minister of Education to establish a multidisciplinary review committee to study the concerns and recommend further changes. Later, through a Ministerial Forum, various educational stakeholders were successful in communicating their concerns about the negative effects of the dual diploma structure to the Minister. The intervention of exogenous stakeholders became a barrier to the institutionalization of the graduation policy.

The study reached several conclusions about the implementation of the new graduation requirements in Alberta. Changing the graduation requirements was an ill-structured problem, that is, a complex set of interrelated problems. However, Alberta Education assumed that the policy problem was well structured in nature and could be implemented using a rational, clearly defined implementation plan. The failure to provide opportunities for multidisciplinary involvement in meaningful dialectical argumentation to deal with the numerous aspects and conflicting values associated with the policy resulted in significant challenges to the proposed policy. Disregard for the multiple realities of implementers by excluding them from the policy development process prevented the development of a shared meaning regarding the change. In this study, the policy implementers lacked the will and enthusiasm to make changes that were imposed from the hierarchy above. Finally, the concept of change as a process, and not an event, was violated. Alberta Education was concerned primarily with the feasibility of putting the changes into effect from their own perspective and in doing so they ignored the need to provide meaningful opportunities over a period of time to enable implementers to develop understanding and commitment to the change.

The findings of this study demonstrated how the relationships among policy makers, administrators, practitioners, and stakeholders, both in the development and implementation of policy, affected the outcomes. Success in educational reform and restructuring is more likely to be the result of collaborative, interdependent efforts among politicians, Alberta Education, administrators, teachers and the community.

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# CHAPTER 1

# CHANGING THE GRADUATION REQUIREMENTS IN ALBERTA: THE NATURE OF THE STUDY

## Introduction

Over the years, various reform movements have inspired thoughtful educational stakeholders and policy makers to review educational practice and recommend changes designed to improve the quality of education and schooling. While there has been considerable discussion as to which program of studies will provide youth with the education that best serves the individual and society, an equally perplexing dilemma faces policy makers. Once the policy vision has been defined, how can the vision be enacted? What process will ensure that the intended outcomes are achieved? Hargrove (1975) identified the gap between the intentions of policy makers and the realization of desired outcomes as *policy implementation*, or "the missing link."

Elmore and McLaughlin present a cautious perspective of past attempts to reform schools:

> the history of American education is, in large part, the history of recurring cycles of reform. There is considerable disagreement over the meaning and effects of these cycles. Reform has historically had little effect on teaching and learning in classrooms. In this pessimistic sense, educational reform is 'steadywork'. That is, measured by substantial changes in what is taught and how, the rewards are puny; but the work is steady, because of the seemingly limitless supply of new ideas for how schools should be changed and no shortage of political and social pressure to force those ideas onto the political agenda. Reforms that deal with the fundamental stuff of education--teaching and learning--seem to have weak, transitory, and ephemeral effects; while those that expand, solidify, and entrench school bureaucracy seem to have strong, enduring, and concrete effects. (1988, p. v)

The essence of Elmore and McLaughlin's claim is that policy implementation can be achieved more easily in organizations characterized by hierarchical, controlled structures, whereas change in loosely coupled and dynamic organizations is not as easily attained.

Changes that are directed at affecting the teaching-learning process have proved to be most difficult to achieve, and yet these are the specific kinds of changes that many writers believe are required to bring about significant improvement to education (Elmore, 1990; Fullan & Stiegelbauer, 1991; Lewis, 1989; Louis & Miles, 1990; Schlechty, 1990). Elmore elaborates on Cohen's model of teaching and learning that prevails in most schools:

> subject matter has been divided into discrete units and allocated to specific parcels of time; teaching has been conceived as telling, learning as the accumulation of facts, and knowledge as the ability to restate what is taught. (1988, p. 5)

This is the conceptualization of what Lewis maintains is "the core of public education, the interaction that takes place between teachers and students, [that] has remained largely impervious to change" (1989, p. 28).

The notion of multiple realities, that is, the different meanings change has for individuals involved in the implementation process, explains why the outcomes of policy initiated external to the implementation site often differ from what policy makers had envisioned. Bosetti's study of the implementation of a policy initiative of the *Secondary Education in Alberta* (Government of Alberta, 1985) policy, the Career and Life Management course (1990), concluded that it was the differing values and priorities of implementers, together with the mechanistic-systems view of implementation, that accounted for the multiple realities of practice.

While educational policy is usually determined outside the school, the school is the primary implementation site (Fullan, 1982). It is the nature of the school, how it is organized, how it operates, and who the people working in it are, as well as how the changes are perceived, that are critical to the success of policy implementation. Louis and Miles (1990) argue that the dominant perspective on organizing schools has been largely bureaucratic and hierarchical since the turn of the century. This model is characterized by the maintenance of stability and efficiency through the establishment of control and accountability using clear, standardized operating procedures, that act to inhibit change. Louis and Miles propose an adaptive model that is vision driven, future oriented, and goal directed as an effective alternative model for organizing schools. In their opinion, this model, based on internally determined accountability, semi-autonomous teams, and versatile, flexible, and adaptive individuals is effective in supporting and encouraging change in the teaching-learning process.

## Background to the Study

In spite of the lack of substantial progress in achieving changes in educational practice, concerned educational stakeholders and policy makers have continued to generate new ideas and promote educational reform. The 1980s brought a new generation of educational reform to North America. Goodlad (1984) characterizes this wave of reform as being a movement "toward greater specification of the subject requirements for high school graduation" (p. 285). Elmore (1988) reflects that the primary reform objective focused on improving the overall quality and performance of the educational system for all students and characterizes the rhetoric of this generation of reform as being quality, productivity, efficiency, and performance. Standards, including increased course requirements, assessment and monitoring devices, and achievement tests, were the main policy instruments (Elmore, 1988). In a later article Elmore (1990) reiterates his earlier assessment of this period of education reform by indicating that it was marked by a focus on academic achievement and higher standards for teachers and students. Educational policy makers, administrators, teachers, and politicians throughout Canada and the United States actively joined this reform movement to improve schools by initiating various activities to establish policies aimed at achieving higher academic standards and greater program standardization.

In 1985, the Government of Alberta announced a new policy for secondary education in the province. A consultative approach with a variety of inputs from a wide sector of stakeholder groups provided background information for the development of this policy (Bosetti, 1986). The Minister of Education established an Advisory Committee to review data from over 200 submissions, 10,000 responses to an opinion survey, a poll, and research to formulate a framework for the policy statement. The policy aims to "balance what young people, parents and adults need, want, and expect with what Alberta society as a whole needs, wants, and expects from our school system, now and in the future" (Alberta Education, 1985). The policy strengthened the government's commitment to academic education by increasing the emphasis on academic (core) courses. In addition, new program streams were introduced to meet various student ability levels. A new course, Career and Life Management commonly known as CALM, was introduced to provide students with the opportunity to develop practical skills and knowledge for everyday living (Bosetti, 1990). Changes to the high school graduation requirements were another policy action that resulted when the policy statement was translated into an action plan.

The policy sets an expectation for high levels of student achievement while acknowledging that the instructional program "must accommodate the developmental needs of students and the differences that exist among students" (Government of Alberta, 1985, p. 8). Students were required to achieve a minimum mark of 50%, as compared to the previous 40%, to obtain credit for their course work. Secondary programs consist of two elements: *core* courses that all students are expected to complete to function effectively in society, and *complementary* courses that provide opportunities for developing and cultivating the unique talents, interests, and abilities of students (Alberta Education, 1985). Overall, the secondary education policy advocated a balanced curriculum that addresses diverse student needs while shifting focus to stronger academic courses (Government of Alberta, 1985).

Implementation of the policy actions are detailed in the *Senior High School Graduation Requirements and Program Development Update, February, 1988* (Alberta Education, 1988a). The new high school diploma requirements came into effect for all students registering in grade 10 beginning in September 1988. Students had the option of enrolling in either a General or an Advanced Diploma program. A senior Alberta Education official indicated that the General Diploma program was projected to meet the needs and interests of approximately 60% of average ability students, whereas the Advanced Diploma program was intended to challenge the 30% of the student population of above average ability. A certificate of achievement was also made available to the approximately 5% of the student population whose achievement capabilities were determined to be lower than average.

The primary changes to the graduation requirements included an increase in the number of specified course credits required for graduation, the introduction of new courses in social studies, math, science, and CALM, and the establishment of Category "C" electives. The initial implementation schedule projected that changes would be phased in over a three-year period beginning in the fall of 1988. In general, the new requirements introduced more academic rigor and limited students' opportunities to select complementary courses.

Once they had developed the new graduation requirements, Alberta Education invited stakeholder groups to study the proposed policy action statements and provide feedback. Many reaction papers and briefs were submitted, particularly from education-based organizations. Stakeholder groups speculated about the impact these changes would have on high school students and the educational outcomes. It was commonly believed that high schools would be faced with the very real possibility of major changes in enrollment patterns generating shifts in needs for specialist teachers, specialized facilities, and equipment. Furthermore, concern was expressed that under the new regulations it would no longer be possible for students to complete both a graduation diploma and apprenticeship requirements (minimum of 40 credits) unless they chose to spend an additional year in high school. A wide variety of concerns were expressed by stakeholders with the belief that Alberta Education would incorporate their recommendations into the final policy statements.

The thrust of the new requirements increased the number of mandatory subjects a student would be required to complete in order to earn a high school diploma. Specifically, students required additional credits in mathematics, science, social studies, and physical education. A new course, CALM, was added to the list of requirements. A new stream of courses, numbered 14-24 in mathematics and science, and 13-23-33 in social studies, was introduced for students in the General Diploma program, while science for Advanced Diploma students was to be consolidated into three, five-credit general science courses at the 10, 20, and 30 levels. Specialized courses in biology, chemistry, and physics were to be available only at the grade 11 and 12 levels.

Over and above the provincial diploma requirements, the Catholic school systems throughout the province mandate courses in religion as a component of the high school program. As courses in Religion 15, 25, and 35 had been approved as locally developed courses for either three or five credits, the Alberta Catholic School Trustees' Association argued that religion courses should be included on the list of Category "C" courses.

## Purpose of the Study

The purpose of this study was to analyze the implementation of the senior high school graduation requirements that were mandated in 1988 as a policy initiative of the *Secondary Education in Alberta* policy (Government of Alberta, 1985). The study investigated how implementation was structured into the mandate, the resulting implementation actions as they evolved at the department, school district, and school levels, how the interaction of variables affected the outcomes, and the impact of the change. Attention was focused on how various stakeholders perceived and experienced the implementation of the new high school graduation requirements. The study was not intended to resolve the ambiguity that pervaded the implementation, but rather to enhance understanding of the multiple realities that exist in school, school district, government, and community environments.

This study examined the key factors (Fullan & Stiegelbauer, 1991) associated with implementation success to describe the general phenomenon of changing the graduation requirements in Alberta. In studying policy implementation, Dunn asks the questions, "what happened, how and why?" (1981, p. 339). This study was an implementation analysis that documented the effects of the new graduation requirements in Alberta and provided a description of the process by which they were implemented in a selected school and its school district in Alberta.

According to McLaughlin (1976), implementation tends to dominate the outcome of a policy. Another reason for studying this problem was to provide an understanding of how the policy was implemented. The new requirements established regulatory action designed to ensure that all high schools in the province complied with the standards set forth in the Alberta Government's policy on secondary education (1985) and the *Senior High School Graduation Requirements and Program Development Update, February, 1988* (Alberta Education, 1988). In other words, school districts and high schools were required to generate efforts and activities intended to operationalize the policy. This study attempted to reveal how the changes were made and the impact of these changes. Preliminary information such as this can assist in determining how the actual changes related to the planned policy goals and provide Alberta Education with feedback regarding the progress of the implementation. Although this is but one case study of a specific implementation, it provided evidence of what goes "right" and what goes "wrong" in policy implementation and adds to the body of knowledge on policy implementation and the process of bringing about programmed change in a high school setting.

## Significance of the Study

The *Secondary Education in Alberta* (Government of Alberta, 1985) policy introduced significant philosophical and operational changes to the junior and senior high schools in Alberta. The significance of the study, therefore, is derived from the subject itself.

Although many theories have been advanced to explain the complex process of implementation, there is no single, clear methodology that will ensure success in all situations. A number of models have been proposed that offer guidelines for bringing about change in various contexts. Fullan and Stiegelbauer (1991) characterize educational change as a dynamic process involving the interaction of a *system of variables* [their italics] (p. 67) composed of sets of factors and themes that will determine the success or failure of an innovation. Key factors associated with successful implementation include the nature of the change and the roles of the principal, the district, teachers, and community, while key themes related to success encompass vision, empowerment, and commitment.

Dunn advises that "the consequences of policy actions are never fully known in advance" and, furthermore, the only way to establish the relationship between policy actions and policy outcomes is to monitor policy recommendations once they have been adopted and implemented (1981). This study provided data about the policy-program proceedings by describing and explaining the implementation of the new high school graduation requirements as a component of the secondary education policy.

An analysis of the implementation of the mandated changes in graduation requirements was important for three reasons. The first was to provide a historical documentation of how the policy was structured and implemented, both at the macro level of government, that is, Alberta Education, and the micro level of a selected school and its school district in the province. This study attempted to increase understanding of the interaction of people, situations, and events that characterized the implementation process.

The second reason for this study was to provide implementation-monitoring information by ascertaining how well the policy was working. Put another way, the study asked the question, "are the policy actions generating the expected policy outcomes?" Finally, the interpretations and conclusions added another facet to the development of a more comprehensive understanding of policy making in Alberta Education in particular, and to public policy making in general.

## The Domain of Inquiry

The subject of this study encompasses three domains of inquiry: policy implementation, the process of planned change, and the nature of high schools. The investigator was conscious of the need to integrate concepts from each of the three domains and reflect on their interrelatedness in understanding how the graduation requirements in Alberta were changed.

### Policy Analysis

Pressure to revise or initiate educational policy arises from various sources. Dunn (1981) indicates that, when decision makers identify an unrealized need, value, or opportunity that can be attained through legislative action, they develop policies. Levin (1976) suggests that pressure may arise from internal contradictions when one or more groups in a society perceive a discrepancy between educational values and outcomes that affect themselves or others in whom they have an interest. Whatever the source of the stimulus or pressure for policy making, the intentions generally focus on improving the quality of education.

The Government of Alberta identified three factors that influenced the development of the 1985 secondary education policy: adolescents and their needs, the rapid changes in society with technological, economic, and social implications, and the considered opinions of Albertans (Government of Alberta, 1985). The new graduation requirements originated as a policy initiative of the secondary education policy. Fullan (1982) recognizes that "implementation makes further policy; it does not simply put predefined policy into place" (p. 79). Translating the secondary education policy statement into policy actions as the new graduation requirements actually began the policy-making process anew.

Dunn (1981) provides a framework for the process of policy inquiry that "involves five policy-informational components that are transformed into one another through the use of six policy-analytic methods" (p. 47). He explains that policy informational components, that is, policy problems, policy alternatives, policy actions, policy outcomes, and policy performance, evolve one into the other by the appropriate use of policy-analytic methods, that is, problem structuring, forecasting, monitoring, evaluation, and recommendation. Dunn asserts that the most crucial and least understood aspect of policy analysis relates to problem structuring: structuring the policy problem correctly will also inform the policy implementation process. It is becoming increasingly apparent that the nature of the problem has implications for the success of the strategies selected for implementation (Louis & Miles, 1990). Different types of problems require different implementation models. Dunn (1981) contends that policy analysts and policy makers are more prone to failure because they solve the wrong problem than because they get the wrong solution to the right problem.

The literature on policy analysis was reviewed to provide insights about the process of structuring problems to assist in the implementation process. Relevant concepts from this literature were used to analyze the implementation of the new graduation requirements.

## Planned Change and the Implementation Process

If reforms in education are to be successful, policy implementation must change practice. Fullan and Stiegelbauer (1991) state that individuals and groups "must find meaning concerning *what* should change as well as *how* [their italics] to go about it" (p. xi). This is exceedingly difficult to achieve given the vast number of individuals involved and the complexity of educational organizations.

According to Louis and Miles (1990), researchers have gained a good deal of knowledge about the change process after several decades of research. Nevertheless, Louis and Miles express frustration about the missing, crucial, change link for most school people: "how to get there: how to lead and manage the process of school reform" (p. xi). Fullan (1990) asserts that the implementation problem is not simply a technical problem where a change gets adopted somewhere, and all that is required is technical follow through. He suggests that it is a political problem because it involves people and real change. Furthermore, he adds that, although the factors that have the most influence in affecting success have been identified, a conclusive implementation model "has proven exceedingly elusive" (1982, p. 55). Fullan categorizes the factors into four groups: the attributes of the change itself, the characteristics of the district, the school unit, and the concerns external to the local school system.

Several researchers have concluded that teachers are the ultimate innovators in schools and that unless teachers were directly and actively involved in the planning and development of the desired changes lasting and significant changes would not occur (Mead, 1979). Furthermore, Mead contends that the individual school itself, rather than the school system, was the appropriate focus for efforts to improve the quality of education. Goodlad (1983) confirms Mead's findings

> improvement is essentially a school-by-school process enlightened by the degree to which those associated with each school and trying to improve it have the data required for building a useful agenda. (p. 31)

Fullan agrees (1990): "the meaning of change cannot be sorted out at the central level, it must be sorted out at the local level" (audio tape).

The design of this study acknowledged the school as a crucial factor in the implementation process. Nevertheless, the policy was developed by and large by Alberta Education. Their actions and support, as well as that of the school district and the external stakeholders, factored into the implementation process. Factors associated with each of these categories were examined to gain understanding of how their interrelationship affected the implementation of the new graduation requirements.

### The Nature of High School

While Louis and Miles (1990) acknowledge that there is substantial, well-documented research that substantiates reform efforts, most of the studies on planned educational change have emphasized the elementary school. Furthermore, they assert that there is clear consensus in the literature indicating "that approaches that are successful in elementary schools may fail when transferred to the more complicated and turbulent environment of high schools" (p. 4). They conclude that clear images of implementation processes suitable for high schools appear to be lacking.

One of the difficulties facing high schools is their diversity of purposes and objectives. Louis and Miles indicate that the limited literature on high school improvement tends to define school improvement in terms of improved student achievement in math and English, whereas Sirotnik's 1983 survey of teachers, parents, and students found that the majority viewed the social, personal, and vocational purposes of high schools to be more important than cognitive or intellectual development. Elmore and McLaughlin (1988) found that pressure from policy makers both in large districts and state departments often forced schools towards uniformity because they treated all schools the same.

The size and organizational complexity of high schools also contributes to the difficulty of bringing about improvement. This is further complicated by the principal's difficulty in being both an instructional leader and a manager of reform. The perception of high school teachers as subject matter specialists and the typical organization of high schools into subject discipline groupings or departments tends to result in small, closed social systems (Hord & Murphy, 1985). Given this organizational structure, Berman and Gjelten (1984) found that school-wide planning is difficult to achieve in high schools.

The nature of high schools as complex institutions adds to the difficulty of changing them. Louis and Miles (1990) suggest that much of the conventional wisdom about change ensures "that major change programs will not get off the ground" (p. 27). Furthermore, they believe that "many of the implementation crises that occur in high schools are difficult to anticipate . . . due to both the inherent structure of schools as loosely-linked organizations and the difficulty of controlling relationships between the school and its immediate environment" (p. 37). Alternatively, they suggest that positive leadership and management of change that focuses on articulating a vision, getting staff to believe that the vision reflects their own interests, and the use of evolutionary planning strategies are more likely to result in successful implementation.

## The Research Problem

### The Research Questions

The first stage of this study documented the policy actions known as the new graduation requirements as they evolved from the *Secondary Education in Alberta* policy (Government of Alberta, 1985). This involved examining various government documents and interviewing key actors who were involved in developing the implementation strategy. The researcher used this part of the study to confirm what the important questions were because, according to Bogdan and Biklen (1982), not enough was known beforehand to assume that the right questions could be structured. The following questions were posed:

1. How was the *Senior High School Graduation Requirements and Program Development Update (February, 1988)* structured from the *Secondary Education in Alberta* policy (1985)?
2. What assumptions were made? What was taken for granted?
3. What was the nature of the policy initiative?
    a. How was the implementation strategy structured into the policy initiative?
    b. What are the primary features of the implementation strategy?
4. Were stakeholders involved in the process? How?
5. Would there be provision for mutual adaptation during implementation?
6. Would the policy be monitored during implementation? How?
7. What are the prospects for institutionalization?

Specifically, this component of the study attempted to discover relevant, reliable, and valid information about the nature of the policy and the strategies employed by Alberta Education to implement the new graduation requirements.

The second component of the study focused on implementation by investigating the resources--time, money, personnel, equipment, and supplies--as well as the administrative, organizational structure, and environmental factors that shaped the implementation. Information was sought to determine how the government and the local school jurisdiction executed the policy so as to influence the selected school to behave in desired ways. The following questions were investigated:

1. How was the policy diffused to the micro level?
2. What incentives were offered for adoption?
3. How did the environment, the institutional setting, and the individuals involved affect the implementation process?
4. To what extent did exogenous factors, such as political, economic, and/or social conditions affect the change process?
5. What are the expectations regarding continuation?

The action site of the policy implementation is the school. At this level, answers to the following questions were sought through interviews and questionnaires:

1. What strategy did the school employ to implement the policy initiative?
2. To what extent has the policy been implemented, that is, what is the level of use (LoU) of the policy mandate?
3. What have been the major impacts on the school?
4. What policy instruments
   a. facilitated the process of change?
   b. inhibited the process of change?
5. What levels of support are being demonstrated by various stakeholders?
   a. administrators
   b. teachers
   c. students
   d. parents
6. What is the perception of fidelity to the mandate? What is the perception of the extent to which this innovation is achieving the goals of the mandate and those of the secondary education policy?
7. Have exogenous factors affected the implementation process? Which ones? How?
8. What are the expectations regarding continuation?

## Assumptions, Definitions, Limitations, and Delimitations

### Assumptions

The following assumptions have been made in conducting this study:

1. Musella (1989) states that practically all policies have as their intention some form of school improvement. In this study, it will be assumed that the new graduation requirements were initiated and implemented in an effort to strengthen the educational standards of graduating students; and therefore, successful implementation was a high priority for Alberta Education.

2. In spite of extensive research in the fields of policy implementation and planned change in the recent years, it appears that many factors contribute to success. This study will contribute to the understanding of these fields of study.

3. A naturalistic case study using interviews, questionnaires, and policy relevant documents was assumed to be an appropriate approach to gain

an understanding of the meaning participants gave to the changes in the graduation requirements.

4. Fullan and Stiegelbauer (1991) suggest that we only find meaning after trying something. This study assumed that it would be easier to understand the success of this policy implementation after it was implemented.

### Definition of Terms

The following definitions have been adopted for the purpose of this study:

*Policy* is a philosophically based statement that is goal oriented and establishes the direction for future discretionary action (Alberta Education, 1984).

*Policy actions* are moves or series of moves guided by a course of action that is designed to achieve valued outcomes of the new graduation requirements (after Dunn, 1981).

*Policy outcomes* are the observed consequences of policy actions taken to implement the new graduation requirements (after Dunn, 1981).

*Key actors* are the various individuals who played major roles in the evolution, adoption, and implementation of the senior high school graduation requirements.

*Adoption* consists of the process that leads up to and includes a decision to proceed with changing the graduation requirements (after Fullan, 1982).

*Change* is the act, process, or result of making something different.

*Implementation* refers to processes such as the sequence of organizational changes and support mechanisms that are undertaken in support of the new graduation requirements (after Scheirer & Rezmovic, 1983).

*Implementation analysis* refers to the study of conditions under which authoritative decisions lead to, or do not lead to, desired outcomes (Berman, 1978).

*Environment* refers to the socio-cultural, economic, and political milieu that forms the backdrop for policy making (Campbell & Mazzoni, 1976).

*Stakeholders* are individuals or groups who have a stake in policy because they affect and are affected by government decisions related to the implementation of the new graduation requirements (after Dunn, 1981).

## Delimitations of the Study

This study drew upon appropriate data associated with the development and announcement of the Government of Alberta's *Secondary Education in Alberta* policy statement in June of 1985. In February 1988, Alberta Education released the policy actions, that is, the new graduation requirements that had been generated from the policy statement in a document entitled, *Senior High School Graduation Requirements and Program Development Update* (Alberta Education, 1988a). Implementation was planned over a four-year period beginning with the grade 10 students registering for high school in the fall of 1988 and continuing on until the 1990-91 school year. This study describes the implementation process within the time frame beginning in September 1988 and continuing on to December of 1991 by explaining the meaning participants conferred on events, people, situations, and objects related to the implementation of the new graduation requirements (Bogden & Biklen, 1982).

The focus of this study was to describe the process by which the graduation requirements were put into practice in a specific school in a specific school district in Alberta. While the content of the new graduation requirements is discussed, this study was primarily an implementation analysis study, that is, it was "not about whether a policy's goals are fit and proper, which is a matter of values; nor does it concern itself with how they were chosen, which is a study of policy making" (Berman, 1978, p. 160). Values-related issues associated with the policy were pursued to the extent that they were an issue in the implementation process.

## Limitations of the Study

The limitations of this study are as follows:

1. Naturalistic inquiry assumes that participants are truthful, that they remember and accurately describe their experiences, and finally that the interviewer has satisfactory interview skills. The willingness of key actors to be interviewed and share their experiences was not a major limitation.

2. The researcher had full access to the necessary official documents that are still in existence. Several years have passed since the initiation of the policy actions and some resources no longer existed. In a few situations, information provided by key actors could not be substantiated using official documents.

3. This study focused on an investigation of the General High School Diploma and the Advanced High School Diploma requirements and specifically excluded the Certificate of Achievement requirements.

4. The case-study design of this investigation limits the generalizability of the conclusions and recommendations reached in this study.

## Organization of the Thesis

This study is reported in eight chapters. The first chapter introduces the study, outlines its purpose and significance, and provides evidence of the need for the study. A brief synopsis of the domain of inquiry linking policy analysis, planned change, and implementation with reference to the new high school graduation requirements established the basis for the questions that guided the study. Finally, terminology used throughout the study, the delimitations, and limitations of the study were defined.

The second chapter presents an overview of the relevant literature related to policy implementation, planned change, and change in a high school setting. It presents the theoretical foundation of the study. The third chapter deals with the research design and methodology, including the case study technique, data collection procedures, tests of methodological rigor, and data analysis techniques. It concludes with a discussion of the ethical guidelines adopted for this study.

The next four chapters report the findings of the study from the perspective of each of the four categories Fullan (1982) identifies as being significant to the implementation. Chapter 4 presents the attributes of the new graduation requirements together with their evolution from the *Secondary Education in Alberta* policy statement. The fifth chapter documents the implementation from the perspective of the individuals who were responsible for implementation at a school site, while the sixth chapter examines the school district's perception of the implementation process. The seventh chapter pursues the primary implementation difficulties and the actions of external stakeholders in effecting changes to the policy.

The final chapter reviews the study and provides a synopsis and discussion of the findings from the researcher's perspective. Recommendations and implications for future policy implementation are discussed, and the reflections of the researcher are presented. The chapter includes recommendations for further study and research.

# CHAPTER 2
# LITERATURE REVIEW

## Introduction

Over the past 20 years, researchers have advanced the knowledge about policy implementation, but they have not been able to develop a comprehensive generic model that would successfully direct the process. Berman (1981) suggests a number of reasons why research findings are "non-cumulative and hodge-podge" (p. 254):

1. studies have different objectives
2. the measurement and conception of independent and dependent variables are seldom the same
3. the unit of analysis differs and renders cross-study judgement problematic
4. many studies inadvertently confound the process of analysis with analysis of variation
5. the inconsistency of findings may reflect educational reality.

Furthermore, Berman believes that the shift in ways of thinking about educational change from the simple unfreeze, move, refreeze views prevalent during the 1950s to the current complex paradigm may be symptomatic of the confusion, inconsistency, and impracticality of recent research findings. The universal finding that has made one thing clear is that policy implementation is a complex process. Nevertheless, depending upon the perspectives and assumptions of the researchers, each study contributes to the understanding of some aspect of the implementation process.

This study was an implementation analysis about the development and introduction of a specific policy initiative, the new high school graduation requirements in Alberta, and the process of change it generated. Three related domains of inquiry were relevant to the study and were the focus of the literature review. First, selected theory and research related to the development and implementation of policy initiatives and their relationship to megapolicy will be probed. Second, the process of planned education change, including factors affecting change, will be examined. Finally, because the particular innovation investigated through this study related to the implementation of new high school graduation requirements, selected literature relating to the context of high schools will be explored.

## Problem Structuring and Policy Formation

Dunn (1981) contends that problem structuring is the most critical phase policy development since the way policy makers classify a problem determines the way they will understand, explain, and attempt to resolve it. He explains that while very few people will quarrel with the nature of a problematic situation, different persons will make various assumptions about the problem, understand it from different perspectives, and disagree about its scope, severity, and importance. The assumptions made by different policy stakeholders about a given problematic situation are "crucial for understanding the different ways that common experiences are translated into disagreements about the actual and potential courses of government action" (p. 101).

Policy problems are "not independent entities, they are parts of whole systems of problems best described as *messes*, [author's italics] that is, systems of external conditions that produce dissatisfaction among different segments of the community" (Dunn, 1981, p. 99). Mitroff (1983) terms complex interconnected sets of problems for which solutions are not readily available as being *wicked problems*. Dunn suggests that the interdependence, subjectivity, artificiality, and dynamics of policy problems have the potential to alert policy analysts "to unanticipated consequences that may follow from policies based on the right solution to the wrong problem" (1981, p. 100).

Dunn proposes a classification system for policy problems based on the relative complexity or degree of interdependence of the problematic situation. Table 1 shows the differences in the structure of policy problems (Dunn, 1981, p. 103). The resolution of a policy problem is related to the nature of the problematic situation. Well-structured problems are those which reflect stakeholder consensus on both goals and policy alternatives. The outcomes of the policy choices are known with certainty enabling decision makers to prioritize their preferences. Moderately structured problems also involve one or few decision makers and a limited number of solutions. However, the outcomes are uncertain, making the probability of each outcome incalculable. The major feature of ill-structure problems is the lack of stakeholder consensus leading to conflict regarding the goals of the policy. In other words, it is impossible to select a single policy alternative that is preferred by all.

Table 1

Differences in the Structure of Three Classes of Policy Problems

| Element | Structure of Problem | | |
|---|---|---|---|
| | Well-Structured | Moderately Structured | Ill-Structured |
| Decision Maker(s) | one or few | one or few | many |
| Alternatives | limited | limited | unlimited |
| Utilities (Values) | consensus | consensus | conflict |
| Outcomes | certainty or risk | uncertainty | unknown |
| Probabilities | calculable | incalculable | incalculable |

Dunn (1981) indicates that the most important policy problems are ill-structured, since public policy making involves the competing values of stakeholders. In the field of education, stakeholder values continually challenge the policy making process. In other words, educational problems have the potential to be classified as ill-structured problems, since according to Dunn, society is not likely to agree upon values that should determine the policy. In such situations, Dunn contends that "policy makers tend to maximize their own values and are not motivated to act on the basis of societal preferences" (1981, p. 106). In addition, ill-structured problems are plagued by previous policy decisions and resource commitments that prevent the consideration of new and creative alternatives. Obtaining additional, relevant policy information about the problematic situation is time consuming and costly, and often limits the search for new information that could enhance understanding of the problem and guide policy formulation. Dunn suggests that the inability of policy makers to predict the range of consequences associated with various policy alternatives tends to result in courses of actions associated with various policy alternatives tends to result in courses of actions that "differ only marginally from the status quo" (p. 106).

Dunn's primary contention about problem structuring is that by understanding the nature of problematic situation, policy makers can be guided in the selection of the policy structuring and policy implementation models that will facilitate its development and implementation. When there is stakeholder consensus about desired policy outcomes the models utilized for policy formation and implementation will differ substantially from the models chosen when stakeholder values are in conflict.

## Public Policy and Implementation

Once a policy has been enunciated by government, there is an expectation that it will be put into practice. Wildavsky (1979) suggests that "*implementation* was conceived during the heyday of the Great Society" when "there was little questioning of the great goals, only dismay that they were not being carried out as quickly or effectively as might have been hoped" (p. 163). When analysts turned their attention to the problems of implementation during the 1970s, they were unable to find any significant work dealing with implementation. It was not until 1975, however, that Hargrove labeled the implementation process as the *missing link*. In 1981, Palumbo and Harder noted that, in spite of "an explosion of research on the subject, . . . no great advances toward the development of a theory" (p. ix) of policy implementation had been made. O'Toole (1986) reviewed the research field and confirmed that there had been an enormous expansion in the academic literature about public policy implementation, but he also observed that few well-developed recommendations had been proposed and several of the proposals were contradictory.

### Policy Implementation Defined

What is meant by policy implementation? Definitions range from the broad and general to the narrow and specific. O'Toole (1986) points out that researchers do not agree about the substance of their subject. One perspective is that implementation refers to everything between the policy statement and its eventual impact on the world. Edward's (1980) definition is an example: policy implementation

> is the stage of policy making between the establishment of a policy--such as the passage of a legislative act, the issuing of an executive order, the handing down of a judicial decision, or the promulgation of a regulatory rule--and the consequences of the policy for the people whom it affects. (p. 1)

Other perspectives limit implementation to mean the actions of the actors responsible for handling the policy. "Implementation, to us, means just what Webster and Roget say it does: to carry out, accomplish, fulfill, produce, complete" (Pressman & Wildavsky, 1973, p. xiii). Van Horn and Van Meter (1977) defined it similarly: "those actions by public and private individuals (or groups)" (p. 107). Narrower definitions such as this one exclude the behavior of all those not officially designated as being responsible for converting the policy into action, and ignore the matter of expected effect that the prescribed actions will have on the world (O'Toole, 1986). Many additional conceptualizations of implementation cover the continuum between the broad and the specific views of implementation.

Distinct schools of thought with respect to the implementation of policy have emerged. O'Toole (1986) suggests proverbs of implementation analogous to Simons' critique of public administration that claims that the principles occur in pairs, and that for almost every principle, one can find an equally plausible and acceptable contradictory principle (O'Toole, 1986, p. 200). Table 2 shows the numerous terms that may be used to distinguish between these perspectives.

Table 2

Terms Representing Contrasting Perspectives of Policy Implementation

| | |
|---|---|
| control | interaction |
| hierarchical | circular |
| top-down | bottom-up |
| mandated/programmed | adaptive |
| classical/traditional | evolving |

As is typical of polarized viewpoints, many perceptions exist among the ideal conceptions. Some of these outlooks represent opposing positions on a continuum, others merely distinctly different perceptions of implementation. Implementation as control emerges when policy is conceived of as "a fully articulated plan, needing only enforcement" (Majone & Wildavsky, 1979, p. 178) or as "the necessary premise for everything that follows" (p. 179). On the other hand, when policy is viewed more generally as "only a collection of words" (Bardach, cited in Majone & Wildavsky, p. 180) or "inanimate messages that must be communicated to those in charge of executing the policy" (Van Horn & Van Meter, 1977. p. 108), implementation focuses on those charged with implementing the innovation, with emphasis on consensus, bargaining, and political maneuvering. Each perspective carries with it certain assumptions that affect the outcomes of the findings and, therefore, it is important to ascertain how policy implementation was perceived when attempting to analyze it.

### Policy Implementation as Control: The Classical-Management Model

This perspective has also been termed the top-down or mandated approach because there is an expectation that policy goals will be faithfully implemented by all levels of administrators exactly as policy makers intended. Two distinct groups and processes are involved: legislators who are the policy makers, and administrators who carry it out (Palumbo & Harder, 1981). Control models of implementation are characterized by clearly stated goals, detailed plans, tight controls, incentives, and indoctrination (Majone & Wildavsky, 1979).

In the 1950s, 1960s, and early 1970s, this was the predominant approach to policy implementation. The first generation of implementation research tended to compare the legally mandated objectives of policy decisions with the extent to which they were achieved; that is, the measurement of inputs and outputs. This model assumed "that policy implementation was a technical, nonpolitical activity directed from the top" (Nakamura & Smallwood, 1980, p. 18). The initial conclusions of this research tended to be pessimistic: the discrepancy between the policy goals and program outcomes was generally very wide, and the implementations were generally regarded as the failure of major legislative initiatives (Mazmanian & Sabatier, 1980). Nakamura and Smallwood (1980) note that there has been a progressive shift away from the *classical*, hierarchical model of implementation. Nevertheless, most models of public policy implementation continue to incorporate the many basic features of this tradition in their strategies.

### Policy Implementation as Interaction: The Political Model

Policy implementation as interaction arises from Majone and Wildavsky's (1979) question regarding the appropriateness of separating policy objectives from policy actions. In the 1973 edition of *Implementation*, Pressman and Wildavsky warn against separating policy design from implementation. Majone and Wildavsky (1979) argue that policy and implementation cannot be isolated for separate discussion and that the purpose of analysis is "to bring them into closer correspondence with one another" (p. 178). Lipsky (1977) contends that people who implement policy effectively make it. He suggests that policy implementation studies should not focus on those who formulate and convey policy, but rather on those who are charged with carrying it out. In this context, policy deliverers are seen as the primary actors in the policy chain and hence the reference to this approach as being locally initiated, or bottom-up, policy implementation.

Lipsky (1977) expands this insight regarding the struggle for power in implementing public policy. Most studies tend to assume that those who formulate policy have greater influence over it than those who merely carry it out, that is, the assumption of hierarchy. Power and status are usually associated with persons "higher" in the organization who have more formal responsibilities. Lipsky contends that the hierarchical assumption of implementation is promulgated both for heuristic purposes and "to provide an orderly way of discussing complex phenomena" (p. 395). Furthermore, he suggests that many policy studies demonstrate that the different motivations of the various actors and agencies in a policy *chain* have widely differing stakes in policy outcomes, and implementations often produce results that diverge greatly from the original intentions. Policy implementation, he argues, should be "both the theory of action and the behaviors undertaken to achieve the projected goal" (p. 396).

Those charged with operationalizing programmed policies have very limited latitude in carrying out the policy; but, according to Lipsky (1977), some implementers "will find ways of doing things they want to do if they have any discretion at all, are not closely supervised, or if the penalties for acting contrary to administrative directives are not highly salient" (p. 397). Elmore (1983) puts it another way:

> Administrators and constituency groups often use the implementation process as a way of demonstrating their opposition to a policy. By exploiting ambiguities in legislative intent, by pointing to particularly glaring practical problems in adjusting to a new policy, and by skillfully exercising delegated control, actors who disagree with the intent of a policy can blunt its impact. (p. 351)

When policy is perceived as interaction, policy deliverers are seen as the primary actors in the implementation process because of their capability to make discretionary judgements that enact the policy.

### Policy as Dispositions: The Cultural-Learning Model

Majone and Wildavsky (1979) reject the notion of policy implementation as control and policy implementation as interaction in favor of policy as dispositions. They propose an alternative perspective of policy as a cluster of potential policies and implementation that begins "with multiple dispositions to act or treat certain situations in certain ways" (p. 183). By assuming that the essential constituents of policy are objectives and resources, and because these are characteristically multiple, conflicting, and vague, the objectives and resources cannot be uniquely determined. Policy goals exist only as potentialities; realizing them depends on their intrinsic qualities and external circumstances. Majone and Wildavsky conclude that policy problems and their implications can often be understood only in hindsight, "after the idea has been used and adapted to a variety of circumstances" (p. 184). The primary principle of conceptualizing policies as disposition acknowledges that implementing actions continuously transform the policy and simultaneously alter resources and objectives.

LaRocque (1983) summarized these three perspectives of policy implementation in table form. The names of similar models have been added, and it is presented in Table 3 as a means of comparing each model on several dimensions. LaRocque suggests that each perspective enables implementers to understand the implementation process from a different paradigm and as such may suggest appropriate implementation strategies given the nature of the policy and the implementation environment.

### Selected Studies of Policy Implementation

Selected studies of policy implementation research will be reviewed in this section, demonstrating both the evolution of the field of study and highlighting the key concepts that contribute to understanding it. Summaries

Table 3

LaRocque's Comparison of Three Models of Policy Implementation on a Variety of Dimensions**

| Dimensions | Model | | |
|---|---|---|---|
| | Classical/ Technological/ *Top-down/ Managerial* | Interactive/ Political/ *Bargaining Model Negotiating Model* | Cultural/ Evolutionary/ *Learning Model/ Adaptive* |
| PM-PI relationship | superordinate-subordinate | balance of power | members of different subcultures |
| PM & PI values | shared | consensual | conflicting |
| PM & PI interests | common | different & conflicting | different & conflicting |
| PI cooperation | automatic | negotiated | problematic |
| PI role | passive consumption | power struggle | adaptation & clarification |
| Focal point | policy | policy in context | adaptation & clarification |
| Nature of policy | set of instructions | set of bargaining points | set of dispositions |
| Nature of policy implementation | *unfolding of plans<br>*systematic & rational<br>*succeeds & is separate from policy making | *interaction of factions<br>*negotiations of interests<br>*intertwined with policy making | *evolution of dispositions<br>*mutual adaptation<br>*intertwined with policy making |
| Implementation strategy | rational - empirical | power - coercive | normative - re-educative |

PM - policy maker

PI - policy implementer

** From LaRocque, 1983, p. 18

of the primary perceptions of Pressman and Wildavsky, Van Horn and Van Meter, McLaughlin, Bardach, Mazmanian and Sabatier, Berman, and O'Toole are presented to illustrate the intricacy of the implementation process. These first-generation implementation analysts demonstrated that the implementation, not the innovation, dominates the outcomes (McLaughlin, 1987).

Pressman and Wildavsky: The interaction of policy and implementation. Nakamura and Smallwood (1980) regard Pressman and Wildavsky as the logical starting point for examining the policy implementation research because their work *Implementation* (1973) has been central to emerging studies on the subject. Their studies focused on efforts to create jobs among the hard-core unemployed of Oakland, California with the assumption that implementation means getting things done. The observations they made were somewhat prescriptive in nature:

1. Implementation should not be divorced from policy; its relationship with policy design is interdependent and complex.
2. Policy can be more closely related to implementation through the creation of new organizational structures.
3. The theory that underlies a policy should not be deficient.
4. Successful implementation is enhanced by continuity of leadership.
5. Simplicity in policies is desirable. (1973, pp. 143-149)

Through the identification of these five considerations, Pressman and Wildavsky introduced a major break with the classical control dichotomy between policy developers and policy implementers by calling for interaction between policy formation and policy implementation.

Van Horn and Van Meter: implementation of intergovernmental policy. Van Horn and Van Meter (1977) viewed policy implementation as a hierarchical process determined by prior policy decisions, but their perspective is important because it expanded the significance of interaction between policy, organizational structure, and implementation by highlighting the influence of human and psychological behavior during implementation. Their analysis produced a model based on six clusters of variables that provided a linkage between policy and performance:

1. Policy
   a. Standards and Objectives
   b. Resources
2. Linkage
   a. Interorganizational communication and enforcement activities
   b. Characteristics of the implementing agencies
   c. Economic, social, and political conditions
   d. The disposition of implementers
3. Performance. (p. 106)

These writers continued the movement begun by Pressman and Wildavsky to place more emphasis on the process of implementation by increasing attention to personal, political, and organizational factors.

McLaughlin: mutation of policy in implementation. McLaughlin (1976) studied American educational programs with a focus on the interpersonal relationships between policy formulators and implementers and especially on the receptivity of implementers to policy change. Implementation efforts were characterized in three ways. Successfully implemented projects involved modification of project design and changes in the institutional setting and personnel in a process labeled *mutual adaptation*. A second type of implementation called *co-optation* resulted when the project design was adapted, but no changes to local staff or the institutional setting occurred. The final type of implementation, *nonimplementation*, described situations where either the process broke down or the project was ignored by participants. McLaughlin concluded that "the amount of interest, commitment, and support evidenced by the principal actors had a major influence on the prospects for success" (p. 170). The findings of this study support a move away from specificity prior to local implementation and the need for policy implementation approaches that favor development of the user rather than the particular educational treatment or product.

Bardach: policy implementation games. Bardach's book *The Implementation Game* (1977) brought the role of implementers into sharper focus. The machine analogy is used to characterize the administrative activities needed to run the implementation process, while the metaphor of games is used to illustrate those tactical and strategic activities that have a particularly adverse effect on implementation. Bardach maintains that the varying conditions of the implementation situation leads implementers to adopt specific tactics and strategies, that is, games to further their own goals that may or may not be consistent with the policy goals. The game metaphor directs our attention to the rules of play, who is willing to play, who is not, and for what reasons, as well as to those who insist on changing the rules of the game. Bardach suggests that implementation can be more effective in two ways: first, by restricting policy goals in recognition of the limitations of social theories and second, by planning around the pitfalls caused by the various implementation games. The emerging trend of Bardach's theory is to focus efforts on policy implementers as the key to successful implementation.

Sabatier and Mazmanian: variables affecting implementation. Sabatier and Mazmanian (1980) brought the areas of policy design and the implementation process together in their model of variables involved in the implementation process. Their research began by identifying a large number of variables affecting the discrete stages of the implementation process and, from this extensive list, they proposed six conditions that they deemed sufficient and generally necessary for effective implementation of legal objectives:

1. clear and consistent objectives
2. adequate causal theory
3. implementation process legally structured to enhance compliancy by implementing officials and target groups
4. committed and skillful implementing officials
5. support of interest groups and sovereigns and
6. changes in socioeconomic conditions that do not substantially undermine political support or causal theory. (Sabatier, 1986, p. 23)

Sabatier (1986) suggested that the first three variables be addressed in the initial policy decision, whereas the latter three be dealt with during the implementation process in response to subsequent political and economic pressure. This approach to policy implementation embraces a top-down approach with substantial consideration for adaptation at the level of implementation.

Berman: macro and micro implementation. Using the assumption that implementation problems arise from the interaction of policies with their institutional settings, Berman (1978) introduced the concept of contextuality to implementation analysis. Macro implementation, that is, implementation at the government level, is the result of the interaction of many actors who determine who gets what, when, and how as the "policy passes through and is transmuted by successive levels of implementing operations" (p. 157). In addition, the macro level attempts to motivate local agencies to adopt and comply with the policy. The micro-implementation takes place at the level of the delivery organization and is determined by the local deliverers who have the power to devise and carry out the policy in a process of mutual adaptation and hence to determine policy outcomes. The degree of fidelity, that is, how closely the outcomes of the implementation resemble the original policy goals and outcomes, will be determined by the extent to which the local agency's goals and interests match those of the policy mandate. Recognition of the mutual adaptation variable creates uncertainty with respect to outcomes. Without the flexibility for local organizations to make adaptations, the success of the implementation is jeopardized.

Scheirer (1981) introduced a variation to the macro/micro implementation concept by expanding Berman's model to include an intermediate level of processes to implementation. Table 4 provides an outline of her proposed analytical framework (p. 36). The three levels emphasize the processes and interrelationships for examining organizational phenomena. The macro level analyzes the whole organization from the perspective of legitimated organizational authority through decision making, acquisition and distribution of resources, and interaction with the environment. The organizational subunits and the processes that carry out the daily work activities form the intermediate level, while the individual members' behaviors, motivations, and cognitions are the micro level. Scheirer's model attempts to bring the major notions of theory and research cognitive supports together by considering implementation as a problem involving the entire organization.

O'Toole: synthesizing the research findings. In 1986, O'Toole conducted an assessment of the field of multi-actor implementation covering almost all major subject fields of policy implementation. He examined over 300 articles and approximately 40 research journals from the previous 10 years with the objective of determining the degree of progress that had been achieved toward developing good, empirically based recommendations on the policy process. He affirmed the complexity of the field and found that few well-developed recommendations, some of them contradictory, had been proposed by researchers. In addition, there was little evidence or analysis of how these recommendations were being utilized. O'Toole summarized the findings of the literature with "a set of sensible principles" to guide implementation actions :

> To maximize the probability of implementation success, from the standpoint of the center, one should
>
> 1. design policies to keep the degree of required behavioral change low (e.g., Mazmanian & Sabatier, 1981; 1983)
> 2. simplify the structure of implementation and minimize the number of actors (e.g., Pressman & Wildavsky, 1984)
> 3. seek more consideration of the problems of implementation during the initial stages of policy formation (e.g., Pressman & Wildavsky, 1984)
> 4. take care to leave the responsibilities of implementation among units sympathetic to the policy" (Van Horn & Van Meter, 1977). (p. 200)

O'Toole (1986) acknowledges that for each of these guiding principles there are empirical research findings that provide evidence of implementations which have used contrary conclusions successfully. He concludes by indicating that the complexity of multi-actor implementation is such that simplistic prescriptions are bound to have a proverbial character.

Table 4

Outline of the Analytical Framework for the
Study of Social Program Implementation

Macro-Level Components
- decision processes
- control processes
- obtaining processes
- relations with the environment

Intermediate-Level Processes
- supervisory expectations
- standard operating routines
- technical requirements of the innovation
- communications flow
- work group norms

Individual-Level Variables
- behavioral skills
- incentives

Summary and Implications

The writings of this selected sample of analysts have provided strong evidence that no one conceptual framework can be used by policy implementers or policy analysts in all contexts. Rather, there are different perspectives, different assumptions, and different clusters of variables that when used in the appropriate context can lead to successful implementation. Nevertheless, McLaughlin (1987) has summarized the significant generalizations about policy, practice, and analysis:

> 1. Policy cannot always mandate what matters to outcomes at the local level.
> 2. Individual incentives and beliefs are central to local responses.
> 3. Effective implementation requires a strategic balance of pressure and support.
> 4. Policy-directed change ultimately is a problem of the smallest unit. (p. 171)

The first-generation implementation analysts enunciated the uncertain relationship between policy and its implementation and outlined the broad parameters for defining it. Second-generation analysts began to discover the relationship among variables affecting policy and practice and offer a caution: "a single model likely will fail to incorporate micro and macro level realities" (p. 177). Third-generation analysts are challenged to develop a model that integrates individual-level factors with structural and allocative decision-making processes.

Berman's characterization of macro and micro implementation as complemented by Scheirer's analytical framework for studying social program implementation is, in many respects, analogous to implementing the change in high school graduation requirements mandated by Alberta Education and will be used as a point of departure for structuring the examination of the new high school graduation requirements in Alberta.

## The Process of Planned Educational Change

In the first section of this literature review, the term implementation was used in the broad sense, that is, the capital *"I"* approach in which implementation encompasses everything and/or anything that occurs between the policy declaration and the impact on the target group. Fullan

(1989) characterized the evolution of the understanding of the change process by placing the themes explored into a time perspective:

| | |
|---|---|
| 1960s | adoption |
| 1970s | failure |
| 1980s | success |
| 1990s | management |

This component of the literature review will focus on the small "*i*" aspect of implementation, which is that aspect of the change process that is one stage, albeit a key one, of the more specific planned change process.

The review of literature on the process of planned change will highlight selected literature associated primarily with educational change. The discussion will begin with a conceptualization of the meaning of planned change and continue with the perceptions of various writers about the stages of the process and the cluster variables that affect it. The strategies to effect change and a conceptualization of success will conclude this exploration of the change process.

## The Meaning of Educational Change

Many educators use the terms change and innovation synonymously with the assumption that it is possible to more or less manage the resulting process. Fullan (1982) characterizes educational change as being both subjective, that is, what the process means to the individuals in the field, and objective, that attempts to make sense of the components of educational change. Leithwood and Montgomery (1982) define the process of change as a "complex form of individual and organizational learning, resocialization and growth" (p. 309). Berman (1981) identifies two types of changes: those that are technologically dominant and those that are implementation dominant. Educational change is typically an implementation dominant process that intrinsically involves adaptation of the innovation to its setting. In other words, variation of the innovation is expected. Inherent in this perspective is the uncertainty of achieving a high degree of fidelity with the original innovation. Commonly accepted measures of successful innovations based on the adaptation perspective have yet to be developed.

## Factors Affecting Educational Change

Berman (1981, p. 280) identifies five categories of factors affecting educational change (Table 5). Berman's main point in considering these

Table 5

Categorization of Factors Affecting the Educational Change Process

---

I. Local contextual conditions
  a. District characteristics (such as school board traits, leadership of administration, organizational structure, level of professionalism, organizational health, size, financial status, priorities)
  b. Characteristics of implementing subsystem (such as elementary or secondary, size, leadership traits, staff attributes, organizational climate)

II. Primary attributes of change efforts
  a. Core substance of technology
  b. Certainty of technology
  c. Complexity of change effort
  d. Scope of change effort
  e. Centrality of change effort
  f. Cost

III. Local policy choices
  a. Participation strategies
  b. Staff development activities
  c. Coordination, control, communication procedures

IV. Endogenous variables
  a. Attitude of users over time
  b. Attitude of key actors over time
  c. Evolution of policy image
  d. Support for change effort
  e. Extent and quality of planning
  f. Degree of conflict over change effort
  g. Community involvement
  h. Clarity about innovation
  i. Change in user behavior, organizational arrangements, and technology

V. External factors (outside variables subject to change during implementation)
  a. Stability of funding
  b. Federal and state regulations
  c. Episodic changes in context (such as new superintendent, new principal, teacher, strike, Proposition 13)

variables is to categorize them so as to clarify their context and their time dependency. Most importantly, their relevance necessarily changes over the time an innovation is implemented. Therefore, it is critical to differentiate and distinguish between them as the change evolves.

### Stages in the Process of Change

Lewin's (1951) concept of change as consisting of three stages--unfreezing, moving, and refreezing--provides a simplistic, albeit useful, concept of the change process. Other theorists have proposed similar three-step stages to characterize how change occurs. Berman (1978) calls the phases the processes of mobilization, deliverer implementation, and institutionalization. Fullan (1982) describes the phases as adoption, implementation, and continuation, although he also uses Berman's terms as synonyms for adoption and continuation. A discussion of each of these three phases of the change process follows. Many of Fullan's factors affecting change are found within Berman's categories of factors affecting educational change, but Fullan further categorizes them into the stage of change they are associated with and expands upon them.

Adoption. The first stage of change is "the process which leads up to and includes a decision to adopt or proceed with change" (Fullan, 1982, p. 39). His 10 factors associated with adoption (p. 42) are listed in Table 6.

Berman (1978) refers to adoption as mobilization to "evoke an image of those political and bureaucratic activities that represent the core of starting a new practice" (p. 177). Although Scheirer (1981) points out that the decision to adopt typically involves the macro-level components most heavily, each organizational level must experience an adoption process as part of the change process. Berman (1978) prefers to conceptualize adoption according to characteristics of the "technology": the incentives offered to adopters, the attributes of the adopters, the political, social and economic conditions of the local environment, and the nature of the larger network, market or system in which the local adopter is embedded. According to Berman (1981), the activities associated with this part of the process include (1) policy image development, (2) planning, (3) generating internal support, and (4) generating external support. The general objective of this stage of implementation is to reach a common understanding of the meaning, intent, and substance of the innovation and to obtain commitment to the policy goals.

The decision to adopt an innovation is by no means a decision to implement the innovation. Berman warns against assuming that adoption is tantamount to execution and cites several examples of adoption without the follow-through implementation. Berman and McLaughlin (1976) conclude that the plans formulated, the resources acquired, and the decisions made at this stage of the change process have a direct effect on what happens in the next phase of the implementation process. The planning process is critical for implementation and institutionalization. But, more important than the plan is the effect of the planning process because it may generate political, bureaucratic, and personal support within the delivery organization (Berman, 1978).

Table 6

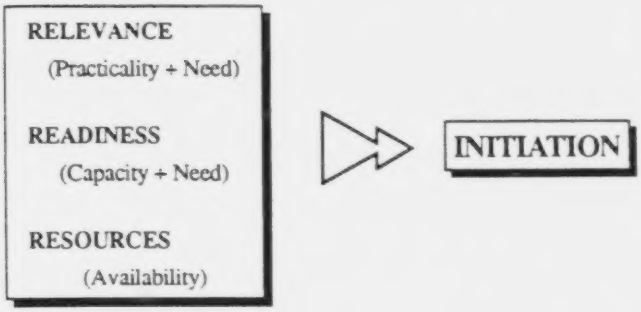
Factors Associated with Adoption

1. The existence and quality of innovations
2. Access to information
3. Advocacy from central administrators
4. Teacher pressure/support
5. Consultants and change agents
6. Community pressure/support/apathy/opposition
7. Availability of federal or other funds
8. New central legislation or policy (federal/state/provincial)
9. Problem-solving incentives for adoption
10. Bureaucratic incentives for adoption

Fullan and Stiegelbauer (1991) identify the three R's of relevance, readiness, and resources as ideally being in place at the launch stage. These elements and their relationship to initiation are found in Figure 1 (p. 63). *Relevance* is defined to "include the interaction of need, clarity of the innovation (and practitioner's understandings of it), and utility, or what it really has to offer teachers and students" (p. 63). *Readiness* may be addressed from the individual or organizational perspective and involves "the school's practical and conceptual capacity to initiate, develop, or adopt a given innovation" (p. 63). The third R, *resources*, addresses the concern for the accumulation and provision of support for the change. Fullan and Stiegelbauer conclude by indicating that initiation and implementation are loosely coupled and interactive. A poor beginning has the capacity to become a successful implementation, just as promising startups can be lost because of what follows during implementation.

Figure 1

Considerations in Planning for Adoption



Implementation. Policy makers and citizens alike, according to Berman (1980), identify implementation as the central problem leading to failure. While acknowledging that there is no one best way to implement policy, he suggests that matching the implementation approach and situation to the innovation can be effective in achieving success.

Fullan (1982) describes implementation as the process of putting an idea, program, or set of activities into being by changing practice. The change may be imposed or voluntary, and it may be clearly defined or designed for incremental development and adaptation. Berman and McLaughlin (1976) assert that this is the crucial stage of the change process "when the project confronts the reality of its institutional setting and project plans must be translated into practice" (p. 349).

The process of implementation is affected by a number of endogenous and exogenous factors. Fullan identifies 15 factors (Table 7) relative to organizational hierarchy, each of which has the potential to contribute to the success of the innovation (p. 56). Fullan considers this list to be "quite inclusive" but "necessarily oversimplified" (p. 56). The factors form a system of variables that interact in a dynamic process to bring about change. The greater the number of factors supporting the innovation, claims Fullan, the more change will be achieved.

The findings of a number of researchers have contributed to Fullan's list of variables affecting change. A Rand Corporation study (Berman & McLaughlin, 1974) found that the implementation of a new program was more likely if people believed it addressed a perceived problem as opposed to being an opportunistic decision. McLaughlin (1976) identified three critical components for effective implementation: opportunities for local materials development; concrete, ongoing training; and adaptive planning and regular, frequent staff meetings. Sabatier and Mazmanian (1981) emphasized the need for clear, consistent objectives, adequate causal theory, and a legally structured process to enhance implementation. Van Horn and Van Meter (1977) stressed the need for clear, accurate, consistent, and timely communication during the innovation.

Table 7

Factors Contributing to Successful Innovations

A. Characteristics of the Change
    1. Need and relevance of the change
    2. Clarity
    3. Complexity
    4. Quality and practicality of program (materials etc.)

B. Characteristics of the School District Level
    5. The history of innovative attempts
    6. The adoption process
    7. Central administrative support and involvement
    8. Staff development (inservice) and participation
    9. Time line and information system (evaluation)
    10. Board and community characteristics

C. Characteristics at the School Level
    11. The principal
    12. Teacher-teacher relations
    13. Teacher characteristics and orientations

D. Characteristics External to the Local System
    14. Role of government
    15. External assistance

Berman (1981) acknowledged that, while no single theory of implementation is likely to capture the multiple realities of this phase of the change process, three models of implementation have been advanced to interpret disparate findings. When administrators attempt to overcome resistance and take actions to enable implementers to do their job, the model is termed *managerial.* In the *learning* model, the perspective of implementation includes both opportunities for teachers to learn new behavior and schools and districts to learn how to change their coordination, control, and information systems. The *bargaining* model sees a conflictual process of negotiation as the focus of interpreting and reaching implementation decisions. Each of these models directs research attention to differing aspects of the implementation problem. Berman (1981) notes that, regardless of the model used, adaptation and clarification are the fundamental attributes of implementation and concludes that "implementation consists of the adaptation of an innovative idea to its institutional setting" (p. 273).

Fullan (1990) noted that all successful innovations have a characteristic *implementation dip* at the beginning of the change process. This represents the period when people are learning what to do and are experiencing frustration. He advises implementers to start small and think big, and he encourages individuals to get involved, that is, do it, rather than rationalize.

Berman (1980) categorizes policy implementation strategies as being either programmed or adaptive. The former assumes that careful and explicit preprogramming of implementation procedures will render implementation problems tolerable, while the latter assumes that policy implementation can be improved when initial plans can be adapted to emerging events and decisions. Berman suggests that policy implementers need to recognize the "different types of situations intrinsic to the context within which a policy is to be implemented," (p. 206) and then design implementation strategies to match that situation.

Continuation. Berman and McLaughlin (1976) refer to this stage as the point "when the innovative practice loses its *special project* status and becomes part of the routinized behavior" (p. 350). Fullan (1982) suggests that continuation represents another adoption decision about whether or not to carry on the innovation and on what scale.

In their study of implementing and sustaining innovations, Berman and

In their study of implementing and sustaining innovations, Berman and McLaughlin (1978) found that continuance occurred in only a small number of cases. These situations were characterized by active leadership at the district and school levels, ongoing financial support, and staff development. Berman and McLaughlin (1978) discovered that not only were most innovations that were not effectively implemented discontinued, but so too were the majority of projects that had been successfully implemented. Among the reasons for lack of continuation are withdrawal of funding, lack of interest and support from the district office, and lack of leadership. Projects undertaken for opportunistic reasons were similarly discontinued. Many projects were discontinued once federal funding ceased. A further reason for abandoning the innovations was the failure to provide ongoing staff development and support for both continuing and new teachers. Fullan (1982) points out that the most powerful internal factor relating to continuation is the availability of key staff and administrators. Departure of key users reduces the interaction necessary to orient new members and maintain the momentum leading to continuation.

Louis and Miles (1990) identified chronic implementation problems through a survey of principals. The 18 problems were categorized according to their source: "the change program itself, the people inside and outside the school who could influence the course of the change program, and the characteristics of the school or district setting" (p. 44). Table 8 outlines the sources of implementation problems. At the top of every change manager's list was the lack of time and energy on the part of teachers, and the lack of money. These problems were found to be common both to innovations that were successful as well as those that failed to be continued. Louis and Miles conclude that "surmounting these difficult problems usually requires active and deep coping skills on the part of school leadership" (p. 47) and, furthermore, "there is no reason to believe that implementation problems ever go away (at least within a four-to-five year time perspective), or that they accumulate" (p. 48).

Fullan indicates that the processes of adoption, implementation, and continuation are never ending and cyclical (1982). The critical factors that affect the change process are interacting continually and must be kept in mind and attended to as needed to achieve success. The research of Louis and

Miles (1990) indicates that the non-rational side of the change process is inherent to the nature of schools, and "many implementation crises are difficult to anticipate and cannot be avoided no matter how effective and thorough the planning process" (p. 51). On the other hand, they provide evidence that many of the implementation issues in schools can be successfully resolved "if there is both will and skill on the part of change leaders and managers" (p. 51).

Table 8

Sources of Implementation Problems

- The Change Program
  - maintaining communication about the project*
  - lack of staff skills that were required
  - slow progress in reaching goals
  - staff disagreement over the desirability of activities
  - a project plan that was too ambitious
- The People
  - teacher time and energy*
  - maintaining staff interests and involvement*
- The Setting
  - money, resources*
  - arranging for staff development
  - constraints of the physical plant
  - unanticipated crises that detracted from the program
  - competing requirements from other change programs

* indicates that this was a major problem for at least 20% of the schools. The others listed are minor: those that over 40% called minor, and less than 20% called major.

Fullan and Stiegelbauer (1991) point out that, although continuation is the third phase in the process of planned change, the adoption-implementation-continuation process is not linear, but rather all phases must be considered from the beginning. Huberman and Miles (1984) concluded that institutionalization is dependent upon three factors:

1. the extent to which the change becomes embedded into the organizational structure through policy, budget, timetable, etc.
2. the degree to which a critical mass of administrators and teachers who are skilled in and committed to the change has been generated

3. the extent to which procedures for ongoing assistance and support, especially for incoming staff members has been established.

The complexity of the many reform and restructuring efforts over the past decade suggest that planning for change is an ongoing process. Fullan and Stiegelbauer (1991) speculate that "school effectiveness projects are in the business of institutionalizing the long-term capacity for continuous improvement" (p. 90).

### Strategies for Effecting Changes

Research suggests that the chances of successful policy implementation are strongly influenced by the organizational, social, political, and legal context within which the process occurs (Berman, 1980). By identifying the contextual situation of the implementation, Berman suggests that success can be enhanced by matching the policy situation to the implementation situation (p. 214). Table 9 proposes a structure to match situational parameters with policy types. When a policy situation is characterized by the values in the structured column, then a programmed policy strategy should be used. On the other hand, if the character of the policy is described under the unstructured values, then the implementation approach should be fundamentally adaptive in nature. Berman claims that policy could be carried out more effectively if the implementation strategy was matched to the policy situation. Many policy implementations call for a combination of strategies that alternate between structured programmed and unstructured adaptive approaches. Additional rapport between the phase of change process and the implementation strategy could further improve the policy performance. Fullan (1982) offers a word of caution regarding the contingency theories of implementation perspective: they have the potential of becoming overloaded with complexity and of falling into the trap of overrationality. The value of contingency theories is maximized when they are used as the basis for structuring a framework to determine priorities for spending time and energy.

Fullan (1982) does not believe that a detailed technical design is the most effective method of planning for change, although he does acknowledge that it has some benefit. Alternatively, he suggests that "the most beneficial approach consists in our being able to understand the process of change, locate our place in it, and act by influencing those factors which are changeable and by minimizing the power of those which are not" (p. 88). The concept of changing is the bottom line for introducing change more effectively. Individuals are counselled to incorporate the assumptions and knowledge and skills about change into their ways of thinking and acting. Fullan's theory of changing perspective focuses on individuals and their perspectives about those situational factors that can be altered.

Table 9

Types of Policy Situations

| Situational Parameters | Situational Type | |
|---|---|---|
| | Structured | Unstructured |
| Scope of Change | incremental | major |
| Certainty of Technology or Theory | certain within risk | uncertain |
| Conflict over Policy's Goals or Means | low conflict | high conflict |
| Structure of Institutional Setting | tightly coupled | loosely coupled |
| Stability of Environment | stable | unstable |

Elmore (1983) suggests five considerations with respect to the complexity and control of planned change based on the nature of policy actions:

> 1. Distinguish between compliance and capacity: implementation depends more on capacity than it does on compliance.
> 2. Distinguish between implementation variations that result from a failure to comply with basic regulations and those that result from differences in capacity.
> 3. Regulate only those activities for which it is possible to specify a clear standard of performance and which constitute minimum prior conditions for successful implementation.
> 4. Focus resources as close as possible to the point of delivery.
> 5. Evaluate policy alternatives by mapping backward from the point of delivery to the point at which policy decisions are made. (pp. 366-367)

Effective change depends upon the successful combination of the many factors. Fullan and Stiegelbauer (1991) encourage the development of implementation strategies that consider the characteristics of the nature of the change, the make-up of the local district, the characteristics of individual schools and teachers, and the existence and form of external relationships in order to produce successful changes.

### Measuring the Success of the Change Process

Determining the success of an innovation is related to how success is perceived. In 1981, Berman noted that the notion of "what constitutes a 'successful' innovation requires--and is undergoing--drastic revision" (p. 264). One perspective, based on the traditional control model of implementation, would attempt to determine the extent to which the actual use corresponded to the intended use, or to match the policy goals with the policy outcomes. If there is a high degree of congruence or fidelity, the implementation may be termed successful. The assumptions made by the adaptation model of implementation result in a contrary perspective of policy success, that the policy intent will be adapted appropriately to meet the needs of the institution and the concerns of the policy. A multivariate definition of "success" encompassing aspects of each of the preceding perspectives is offered by Miles (1979):

a. reasonable congruence with the original vision
b. continued problem-coping ability
c. the satisfaction of stakeholders (students, staff, parents, and administrators) and
d. the actual achievement of educational outcomes (p. 9).

Berman and McLaughlin (1976) developed three measures of the effectiveness of an implementation:

1. Perceived success: the relative extent to which project participants believed that goals were achieved.
2. Change in behavior: the type and extent of change in teacher and administrator behavior as perceived by the participants.
3. Fidelity of implementation: the extent to which the project was implemented as originally planned. (p. 350)

The conundrum of fidelity versus variation in determining the success of planned change is a dilemma facing policy formulators and implementers alike. Fullan (1982) points out that while planned change attempts to engineer variation and maximizing consistent implementation, the dilemmas can be mitigated by respecting variations and incorporating interaction and dialogue in a checks-and-balance manner .

## The Context of High Schools

In the preface to the *1983 Handbook of Teaching and Policy*, Shulman and Sykes recount Gerald Grant's delightful comparison of high schools to various fruits. At the turn of the century, American high schools were like avocados with thin skins of external policy, meaty homogeneous middle layers of students, and solid cores of adult authority. The 1950 high school had become like cantaloupe, with thicker skins of external policies, a relatively uniform expanded student body and a firm core of local authority. By 1983, the high school was more like "a watermelon with a thick rind of external policies, a large and diverse student body and adult authority scattered throughout like watermelon seeds" (p. vii). Exogenous efforts to influence high schools have increased and accelerated over the years with varying results. The preceding section of the literature review has demonstrated the importance of the institutional setting and the implementing individuals in actualizing policy. Berman (1978), for example, suggests that the "*gestalt* of local system dynamics needs to be understood before analyzing the foreground of project implementation" (p. 174). To complete the review of the literature pertinent to this study, this section will examine the context for the implementation using a framework adapted from Berman (1978).

### The Organization of High Schools

The typical high school is organized into subject discipline groupings or departments whose specific topical focus tends to result in small, closed social systems (Hord & Murphy, 1985). Given this organizational structure, teachers tend to identify with their departments, and not with the school overall. Furthermore, teachers too frequently view their school administrators as being isolated because of their lack of experience and subject-related intellectual credentials. Theoretically, the department chairman bridges that gap between teacher and administrator; however, in practice there are as many variations as there are situations.

Hall and Guzman (1984) point out that high schools are overwhelmingly complex organizational places about which it is "extremely difficult to develop generalizations about the real dynamics and designs of the change process" (p. 2). From their field work they suggest that the sources and impetus for change and innovation are typically external to the high school. This "top-down" strategy appears to be the prevalent change strategy in high schools, and as such, the implication for members of the school staff is that they would have major responsibilities for implementation but fewer opportunities to create and initiate change. Nevertheless, all of the various actors in and around a high school have the potential to conceive of and push for adoption of innovations as well as to enact them.

Boyer (1983) makes the point that schools are dominated by time. Schools start on time and end on time. Bells announce the beginning and completion of each component of the day, and clocks are everywhere. The various actors in high schools structure their activities according to the time segments. The departmental organizational structure appears to be entrenched in high schools and effecting change in these schools will demand a better understanding of how their structure affects their function. Working within the existing structure holds more promise for reforming education than reforming the structure itself.

High school students. Many students have what Boyer (1983) calls a love-hate relationship with their schools. Senior students agree that academic subjects should be emphasized, but they also criticize poor teaching and their own study habits. Generally, students do not consider their high schools as outstanding, although they do not seem to feel intensely negative about school either.

Today's youth face the grim prospect of being unable to attain the same social class or material wealth as their parents (Roberts & Cawelti, 1984). Furthermore, community factors such as increasing alcohol and drug abuse, family instability, the threat of nuclear destruction and environmental catastrophe, and increasing suicide rates place continuous pressure on students. The social structure of each school is unique. Within this social milieu are a variety of actors ranging from good students and student body leaders to potential dropouts and trouble makers. In addition, student cliques, with different names depending upon what they do and where they hang out, determine where students fit into the social structure and consequently their attitudes towards school.

An Illinois study (Csikzentmihalye & Larson, cited in Roberts & Cawelti, p. 136) reported that teenagers spend less than 2% of their total day with adults other than their parents, about two hours per week with their mothers, and less than half an hour per week with their fathers. Their time is spent primarily with television, socializing, and school. Students continue to be tested with decisions regarding drug and alcohol consumption. Both substances are readily available in high schools although use is usually well camouflaged.

Many high school students are also employed on a part-time basis during the academic year, and while this experience is not exactly undesirable in that students become familiar with the realities and expectations of the work place, extensive part-time work--beyond 15 hours per week--is incompatible with quality educational outcomes (Radwanski, 1987). In a survey of the students in an Edmonton inner-city high school, Pisesky (1989) found that 54% of students held jobs and that 53% of these working students spent more than 15 hours per week at their jobs. Approximately half of the students indicated that they worked primarily to earn their own spending money, while about one-fifth of students worked to contribute to family income. For some students, their outside activities compete with their educational interests, and result in conflict or failure.

Roberts and Cawelti (1984) discovered mixed results when talking to students about school. Generally, students liked their teachers, liked school, and took it seriously but, when asked about how they could get the best education, they gave conflicting responses. Some students wanted more courses in economics, government, business, accounting, and foreign languages, while other students vigorously disagreed, requesting something beyond "the same old thing" (p. 81). Radwanski (1987) claims that the effort to make education relevant over the past two decades has not been successful "either in terms of making education seem sufficiently relevant to young people to keep them in school until graduation or in terms of securing satisfactory pedagogical outcomes for those who do remain" (p. 185).

According to Boyer (1983), students' decisions about what courses they should or should not take are made casually with little guidance. Students named their mothers and peers as being the people who help them the most in planning the high school programs. The stream or track a student enrolled in determined to some extent the particular courses selected. Students gave varying responses to the question about school goals. Boyer found that students wanted to " 'get out,' 'be with friends,' 'get into a good college,' 'pass the competency exam,' 'get a job.' " Others were more cynical: " 'the school is here to keep you off the street and out of trouble until you're old enough to get out there and deal with it' " (p. 61).

High school teachers According to Fullan (1982), "educational change depends on what teachers do and think--it's as simple and complex as that" (p. 107) and while it is difficult to dispute this concept, in reality most teachers have not taken the initiative to undertake change beyond their own classrooms. The teacher is primarily the recipient of change rather than the initiator of change (Rutherford & Murphy, 1985). In this role, the teacher receives the change from an outside source, such as the school administration, the district office, or state or federal officials, and is expected to implement it and make it work. Too often teachers do not know where the change initiative came from, why the change is being made, when they are expected to start using it, and how it is to be implemented. Data from the Rutherford and Murphy study did not support the assumption that teachers are quite resistant to change. In fact, teachers reacted more positively than negatively to change. The source of the change had the greatest influence on teacher reaction to change. When change was initiated from outside sources, teacher reaction was positive only 38% of the time, whereas when teachers were the source of change, the response was positive approximately 86% of the time. From these findings it would appear that the role of teachers, that is, what they can and should do to enhance school improvement efforts, requires further investigation.

Elmore (1983) concurs: "when teachers are asked where they get most of their ideas for new instructional practices, they reply that they rely mainly on other teachers" (p. 357). The way to reach teachers then seems to be to put them in touch with other teachers and not administrators. Berman and McLaughlin found that implementation and continuation are strongly related to the individual teacher's sense of efficacy and control in the classroom (cited in Elmore, 1983, p. 357).

The departmentalization of teachers at the high school level poses several problems in making changes. Roberts and Cawelti noted that, as schools began to create new graduation requirements, teachers began to worry about their turf (1984). Common concerns included fear of job loss because fewer electives were being offered and the feeling of being a "loser" because other departments were teaching more while their department was teaching less. Suspicion relating to administrators' hidden agendas and other teachers' motives created a sense of insecurity among some teachers.

The Rand study (McLaughlin & Marsh, 1978) identified four broad categories of staff development factors that they deemed crucial to the successful implementation and continuation of local change efforts: institutional motivation, project implementation strategies, institutional leadership, and certain teacher characteristics. Their study suggests five general assumptions about professional practice that should be incorporated into effective staff development activities:

> 1. in terms of knowledge about the practice of teaching, teachers often represent the best clinical expertise available
> 2. the process by which an innovation comes to be used by teachers is adaptive and heuristic
> 3. professional learning is a long term, non-linear process
> 4. the process of adoption of a specific innovation helped define the program-improvement goals
> 5. professional learning is critically influenced by organizational factors in the school site and in the district. (p. 91)

Gaining the commitment of teachers was found to be the most influential factor in effecting change. Project success was deemed to be unlikely unless teachers were prepared to work hard to make it happen. The authors conclude that even the "best" educational practice will not come to fruition "in the hands of an inadequately trained or unmotivated teacher" (p. 69) and urge recognition of the concept that the problems of reform are more the function of the organization and its people than of the technology.

Corcoran (1988) compared the problematic work place conditions identified by teachers with those identified by researchers as related to school effectiveness. He found considerable overlap between the two sets of issues and recommended that policy makers listen carefully to teachers' concerns about their working conditions. Teacher job satisfaction has a direct effect on students. For this reason especially, Corcoran deems work place reform to be in the public interest. The broad agenda identified resource and workload problems and changing teacher roles and empowerment as the key issues requiring reform.

Descriptions of the characteristics of the work environment that enhance teacher effectiveness were summarized from the effective schools literature:

1. shared goals and high expectations of success
2. respectful and dignified treatment as professionals by superiors and by parents and students
3. orderly school climates in which discipline is a by-product of school organization
4. strong and supportive instructional leadership and supervision
5. adequate and protected instructional time
6. participation by teachers in the decisions affecting their work
7. regular opportunities for interaction and sharing with colleagues that promotes skill development and professional support
8. recognition and rewards for their effort and achievement
9. opportunities for professional growth, and
10. decent and safe physical working conditions. (p. 16)

Higher levels of teacher performance resulted when these conditions pervaded teaching environments. "Absenteeism, reduced levels of efforts, lowered effectiveness in the classroom, low morale, and reduced job satisfaction" (p. 19) were among the negative effects evoked by working conditions characterized by "poor leadership, lack of respect, lack of influence over policy, limited opportunities for collegiality, lack of support and recognition, and poor student behavior" (pp. 26-27). Better working conditions were consistently associated with more positive attitudes, higher levels of work effort, and a greater sense of efficacy except in schools where there was strong positive leadership, an orderly climate, and high staff collegiality. When these conditions existed, they tended to compensate for deficiencies in other areas of the work environment. Schools identified in the effective schools studies were also more successful at recruiting and holding talented teachers because their principals created conditions that encouraged more teacher support from teacher colleagues and supervisors and resulted in improved teacher confidence and success with students.

Good teachers and good teaching are the essence of effective schools, and it has only been in the latter part of the 1980s that policy makers have come to this realization. The day-to-day frustrations of teachers have a major impact on educational outcomes and are being neglected in favor of the bigger issues of restructuring schools and empowering the profession. Work place reform is emerging as a significant factor in making changes in schools.

Department heads in high schools. Johnson (1988) concluded from her examination of high school departments that they have endured over a wide range of settings and, therefore, are not likely to be dismantled or replaced as the structure for organizing high school teachers' work. As subject matter moves into focus as the centerpiece of influential reform efforts, researchers are attempting to describe the function of departments to determine how they might best be used in promoting educational reform. Balancing subject specialization with student outcomes in considering the students' overall educational experience is becoming a dilemma. Strengthening departmental influence needs to be coordinated and reconciled in the best interests of the school as a whole to avoid potential power struggles.

Hall and Guzman (1984) found that "department heads in most instances are not prime movers for change and do not typically facilitate implementation." Furthermore, their investigations found that most department heads were primarily "passers of information, orderers of books, and maintainers of inventories" (p. 10). Although there were exceptions, in general they did not serve as leaders or facilitators of change. The personal characteristics and interests of the individuals who served as department heads appeared to be related to those exceptional situations when department heads acted as change facilitators. The principal's expectation of department heads was the primary key to their effectiveness as change agents. The encouragement and support of the principal appears to be related to the amount of change activity facilitated by the department head. Departments with guaranteed enrollments, for example, core courses, were found to be generally less innovative than those that must market their programs; for example, electives. From this study, it appears that department heads assume a key role in facilitating change either when they are motivated by their school administration or when they have the personal interest and leadership characteristics to act in the role.

Hord and Murphy (1985) studied the function of leadership and facilitation of change through department heads over a three-year period in 30 schools. They developed six configurations that described the function and behaviors of the department head role:

> (1) serving as a communication liaison
> (2) serving as department manager
> (3) assisting teachers in improving performance
> (4) participating in program improvement and change
> (5) fostering cooperative relationships. and
> (6) teaching in the department. (pp. 43-44)

They concluded that the role of department head is a "very viable one for facilitating the change process, and, consequently, a very promising one for assisting secondary school teachers and administrators in school improvement efforts" (p. 71).

The position of department head as part teacher and part administrator contributes to what can be a productive tension in the school. Policy implementation that defines the role of the department head in the change process together with specific training to clarify expectations and provide change models will increase the likelihood that department heads will develop into change facilitators (Johnson, 1988).

High school principals. The role of the high school principal is multifaceted, multidimensional, highly fragmented, and very busy (Huling-Austin, Stiegelbauer, & Muscella, 1985). Although there is much debate about how realistic it is to expect high school principals to be instructional leaders, it would appear that they are the logical facilitators for change in schools. At the same time, it appears that some principals are more successful in effecting change than others. Hall & Guzman (1984) suggest that success can be attributed to style of facilitating change. More active change facilitating principals adopt an initiator style of bringing about change, whereas less active principals tended to use the responder or passive style of facilitating change.

Huling-Austin, Stiegelbauer, and Muscella (1985) suggest that principals appear to use one of two strategies to facilitate change. First, the principal must articulate a vision for the school to the school staff, and second, the principal must actually become involved putting the vision into practice.

Effective principals translated their vision into goals and objectives and involved school staff in devising strategies and implementing the change. The probability of effecting the change is greatly increased when the principal is directly involved in the implementation. The findings of this study suggest that:

> 1. Principals don't do it alone.
> 2. Change can occur without the principal but not without some principal sanction.
> 3. Change leadership does not have to be administrative, but usually involves administration in some way.
> 4. A vehicle for change is as important as a plan for change.
> 5. At the high school level, the involvement of different groups and different leaders cooperating for change is one way to accommodate for the complexity of the institution and its cross departmental and administrative lines. (p. 106)

From their study of high schools, the authors conclude that there is a variety of strategies and patterns for providing the effective leadership that results in successful change, and principals can make a difference in the facilitation and guidance of change.

The role of assistant principals in the change process varies from those who have taken a unilateral lead in facilitating change, to those who are part of a close working team of administrators acting to bring about change, to those who focus on managerial tasks within their schools. Hall and Guzman (1984) found that, when the principal's style was more active, there was more job sharing between the principal and assistant principals. Whereas, if the principal's style was less active, the assistant principal was assigned tasks requiring individual responsibility and remaining relatively constant from one year to the next. The potential of other school administrators, like that of the department head, in acting as change facilitators in high schools seems viable but will be actualized only through role clarification, inservice education, and development of their leadership skills in policy implementation.

## The Effectiveness of High Schools

During the 1970s and early 1980s, a number of charges were raised about the effectiveness of high schools. The most common allegation was that schools were soft and students were not sufficiently challenged (Roberts &

Cawelti, 1984). As a result of the "deep trouble" the urban high school was in, the Ford Foundation (1984) undertook a program to ascertain whether American high schools were improving. The findings reveal "the happy discovery that many city high schools were doing better and showing improvements over previous years--more so than a lot of people thought or the public record had noted" (p. 65). The foremost finding of the two-year investigation was that schools were increasingly clear about their primary mission to provide all students with a basic, substantive education. Schools had resolved issues relating to social and racial frictions and fiscal retrenchment and had refocused on education--teaching and learning--as their top priority. Complementing the goal clarification was the vision and determination of the teachers, parents, students, and principals and the availability of necessary resources to enact that vision to initiate and sustain school improvements. Other studies had similar findings. Alpern (1986), for example, studied an inner-city Edmonton school and noted that similar actions had resulted in a more effective school.

Roberts and Cawelti (1984) undertook a two-year general education network project as a leadership strategy to engage 17 high schools in the process of redesigning the curriculum based on the assumption that local schools should have command of their curriculum development. Although the degree of success attained varied among the sample schools, the majority made recommendations to their school boards regarding graduation requirements and common learnings. The authors' experiences with this project led them to make the following recommendations for the education of the citizens of the future:

1. Seek consensus on the high school's mission.
2. Set policy ensuring periodic redesign of the curriculum.
3. Set curriculum balance as a top priority in curriculum development.
4. Develop an ongoing program of staff development.
5. Develop an organizational structure to ensure curriculum development.
6. Provide sufficient time to design common learnings for all students. (p. 137 - 141)

According to Roberts and Cawelti, these six elements are deemed to be crucial if the genuine, substantive improvements proposed to redesign general high school education are to be effected.

Graduation requirements and curricula. The Association for Supervision and Curriculum Development undertook a major study to address the curriculum problems of high schools (Roberts & Cawelti, 1984). The findings indicate that many schools have increased the total number of specific courses required for graduation. Some schools have mandated an extra year in English, math, or science, while others have mandated specific courses in these disciplines. While math and science have been proclaimed as the big "winners" in the redefinition of required courses, a major addition has been in the humanities. The addition of several more mandatory courses has limited the number of electives that high school students can select. Roberts and Cawelti found that in most of the schools in their study, the number of electives were cut back dramatically--anywhere from 30% to 66%. The question they pose, as a consequence of the increased requirements, is whether it will lead to better teaching and increased learning. Certainly, some students who want a good education will benefit, but what of students who are disaffected? How can these students be motivated to develop a love of learning? Increasing the graduation requirements is not likely to be the answer for all students.

Pathways through high cchool: the Maryland experience. Rossman, Wilson, D'Amico, and Fernandez (1987) initiated a study on the effects of Maryland's new graduation requirements in 1985. The overall effect of the new requirements was to stipulate one additional credit (course) in each of mathematics, fine arts (music, visual arts, dance or theater), and CHIVES (a vocationally oriented course in computers, home economics, industrial education, or vocational education). Local jurisdictions have the option of setting stricter requirements than those set by the state. In addition, local systems may identify advanced courses that can be credited towards the Certificate of Merit option. The changes mandated by the State of Maryland follow a trend throughout North America to increase the number of mandatory courses students require to achieve a high school diploma.

Preliminary findings of transcript records analysis and interviews with administrators, teachers, and students one year after mandatory implementation indicate that the new requirements were already having some impact in the sample schools. Based on these early results, three recommendations were made with respect to implementation. First, because the communication between the district central office and the local schools was problematic, it was suggested that direct contact between the state government and local high schools would improve information dissemination. Second, because the new requirements emanated from a study of secondary education, the focus of the new graduation requirements should extend beyond just increasing the number of courses taken to include in-depth examination of school organization, course content, and instructional approaches. Finally, in light of the expressed concern about potential increased dropout rates of at-risk students, close scrutiny of the intended and unintended effects of the new requirements was recommended. Transcript analysis suggested that a fairly large proportion of students may need additional help meeting new requirements, especially in mathematics.

At the time of reporting, this study had investigated only the first year of the implementation of the new graduation requirements, and the authors acknowledge that the findings are too "young" to be conclusive. It is projected that the study will continue until the first class to be completely regulated by the new requirements (the class of 1989) graduates. Nevertheless, two policy conclusions addressing the efficacy of state-level initiatives regarding reforming secondary education were made: first, the state initiatives had limited impact on local schools and second, state-level reforms had not been sufficiently sensitive to the individual characteristics and idiosyncrasies of local schools to avoid unanticipated outcomes.

## Chapter Summary

This review of selected literature focused on the theory and research associated with the implementation of public policy and the process of educational change. Various perspectives of the implementation process and the variables affecting success were explored. The focus then shifted to a review of the literature with respect to the contextual setting of high schools. The literature review will inform the discussion of findings in the four chapters that report the findings of the study and will further be used to interpret the overall discussion and conclusions presented in the final chapter.

The next chapter will present the research design that guided the study.

# CHAPTER 3
# RESEARCH DESIGN

## Methodology

The design of the research adopted for this study utilizes the perspective of the interpretive paradigm that Burrell and Morgan (1979) characterize as seeing "the social world as an emergent social process which is created by the individuals concerned" (p. 28). Qualitative research is an approach that is consistent with this paradigm. Bogdan and Biklen (1982) use *qualitative research* as an "umbrella term" (p. 2) describing research strategies that share the following characteristics:

> 1. Qualitative research has the natural setting as the direct source of data and the researcher is the key instrument.
> 2. Qualitative research is descriptive.
> 3. Qualitative researchers are concerned with process rather than simply with outcomes.
> 4. Qualitative researchers tend to analyze their data inductively.
> 5. "Meaning" is of essential concern to the qualitative approach. (pp. 27-30)

Qualitative researchers continually ask questions of the people in the situation they are studying to discover "what *they* are experiencing, how *they* interpret their experiences, and how *they* themselves structure the social world in which they live" (Psathas, cited Bogdan & Biklen, 1982, p. 30). Although Bogdan and Biklen suggest that naturalistic inquiry is another name for qualitative research, Owens (1982) differentiates between them. Naturalistic, he claims, "alludes to *ways* in which one may seek to examine reality," whereas "qualitative alludes to the *nature of the understanding* that is sought" (p. 7). This clarification conceptualizes naturalistic research as a methodology for conducting qualitative research.

Owens (1982) goes on to describe naturalistic inquiry as being one expression of the nature of reality in which the real world is viewed as being a dynamic system of "parts" that are so interrelated that each part influences all of the others. Understanding reality further requires acceptance of the notion that even separating the parts for examination distorts the system one is trying to understand: parts must be examined in the context of the whole. Essentially, then, the reality of the world is viewed from a phenomenological perspective. The naturalistic paradigm acknowledges the existence of differing perspectives of reality. The researcher attempts to integrate the various meanings ascribed to events, situations, individuals and their relationship to present an holistic viewpoint and create understandings about the area of inquiry.

Inherent in Owens' approach are four basic approaches to naturalistic inquiry that will be used to guide this research:

1. Data will be collected primarily through direct contact between investigators and actors in the situation being studied.
2. The study design will utilize emergent strategies rather than a priori specification.
3. Data categories will be developed after data have been collected and examined.
4. Generalization of the findings to a universe beyond the study will not be attempted.

Using these guidelines, the specific research methodology will take the form of a case study to examine the macro and micro change process of changing the graduation requirements in Alberta according to the policy action plan defined in *Senior High School Graduation Requirements and Program Development Update* information bulletin issued by Alberta Education in February 1988. This study focused on how various participants perceived and experienced the goal of changing the senior high school graduation requirements. It was not intended to resolve the ambiguity that may pervade the implementation, but rather to enhance understanding of the multiple realities that were experienced by the key actors and stakeholders in translating this particular policy initiative into action.

Although efforts have been made to quantify or measure program implementation by statistical methods (Rossman, Wilson, D'Amico, & Fernandez, 1987; Scheirer & Rezmovic, 1983), the overall effect of this approach tends to weigh inputs against outcomes with minimal concern for what transpired in between. Measuring change as the difference between commencement and concluding events conveys an understanding of the outcomes that were achieved, but very little understanding about how they were achieved. Many writers (Berman & McLaughlin, 1976; Berman, 1981; Elmore, 1978; Fullan, 1982; Pressman & Wildavsky, 1979; Tushman, 1977) acknowledge the phenomenon of change as a process. Analyzing the implementation process increases understanding both of the interaction among various factors that bring about the change, and about how those factors might interact in other planned changes.

The case study method was selected as the overall design of this study for two reasons: first, because of the nature of the problem under investigation in this study, statistical data will be incomplete and second, because it affords the opportunity to "understand unique social phenomena" (Yin, 1984, p. 14) of a real-life situation. Researchers using case study methods gather data through "carefully planned observations in natural settings using interviews, qualitative analysis, and narrative reports" (Stake, 1980). The process of changing the high school graduation requirements in Alberta is a real-life situation that was suitable for investigation using the case study method.

### Case Study Approach

Case studies are defined in various ways. A simple explanation is offered by Bogdan and Biklen (1982): "a case study is a detailed examination of one setting or one single subject, or one single depository of documents, or one particular event" (p. 58). Gay (1987) defines case studies as in-depth investigations of individuals, groups, or institutions that determine the relationships among factors that have resulted in the current behavior or status of the subject of the study. Its purpose "is to determine *why*, not just what" (p. 207). Yin (1984) characterizes case studies as empirical inquiries that use multiple sources of evidence to investigate contemporary phenomenon within their real-life contexts when the boundaries between phenomenon and context are not clearly defined. In general terms, Stake (1980) defines case studies as the study of a bounded system emphasizing the unity and wholeness of that system, but confining attention to those aspects that are relevant to the research problem at the time. These definitions point out several basic characteristics of the case study methodology: its holistic nature, emphasis on real-life contemporary contexts, primary theme focus with shifting boundaries, naturalistic data collection techniques, and search for causal relationships. The case study seeks an understanding of the particular idiosyncrasies of the phenomenon under investigation either with or without an interest in generalizable findings.

In case study methodology, one situation is selected and studied at great length and in much depth. The investigator seeks answers to *"how"* and *"why"* questions "about a contemporary set of events over which the investigator has little or no control" (Yin, 1984, p. 20). Case studies tell stories describing the dynamics of complex interactive processes among people, structures, and technologies, and in so doing, assist others to comprehend the case. The documentary style used to report case studies provides a rich understanding of the intricacies of the case and, although tentative qualitative conclusions are usually drawn, readers are also allowed to reach their own inferences (Department of Educational Administration, 1987, p. 27).

Sample size, the very characteristic of case studies that is their strength, that is, the depth in which the researcher pursues one particular situation, is also the point of greatest criticism. All investigative efforts are focused on increasing understanding of only one situation. As a result, the fault of case studies is that they lack objectivity, rigor, and precision (Yin, 1984). Another frequent concern raised relates to the generalizability of case studies (Bogdan & Biklen, 1982; Stake, 1980). Yin (1984) answers, by observing:

> the short answer is that case studies are generalizable to theoretical propositions and not to populations or universes. [It] does not represent a "sample" and the investigator's goal is to expand and generalize theories (analytic generalization) and not to enumerate frequencies (statistical generalization). (p. 21)

Bogdan and Biklen (1982) make the point that the type of case selected for study is a factor in generalizability. If it is a "typical case," then the more traditional definition of generalizability might apply, "on the basis of the similarity of their case study to others reported in the literature" (p. 63). Other researchers "leave it up to the reader to come to their own conclusions concerning generalizability" (p. 63). A similar distinction is made by Stake (1980) in referring to case studies as yielding "naturalistic generalizations" that are substantially different from the more commonly accepted "scientific generalization" emerging from experimental types of studies. Despite this shortcoming, the case study method has been selected for this research because it was best suited to achieve the objectives of this study, namely, enhancing our understanding of the change process that took place in changing the high school graduation requirements in Alberta.

## Pilot Study

In order to test the basic design of the research and the suitability/readability of the questionnaire, a pilot study was conducted during November and December of 1989. The sample for the pilot study included administrators, teachers, students, and their parents in a school district other than the one selected for the actual case study.

All of the teachers in the school were asked to complete the teacher version of the questionnaire. The students present in the two CALM 20 classes on the day of the testing completed the student form of the questionnaire, and their parents were asked to complete the parents' version of the questionnaire. In all cases participants were asked to note any difficulties they had understanding the intent of questions. The rate of return on teachers' and parents' questionnaires was satisfactory, and the data provided were both acceptable and appropriate.

A senior superintendent from the district office, a high school principal, three assistant principals from the school district, the teacher-counsellor, and the math-science department head consented to participate in audio-taped interviews for the pilot study. In addition to providing meaningful data, the test interviews gave the researcher an opportunity to gain interviewing skills, ascertain the appropriateness of the investigative questions, and determine the utility of the data. It also enabled the researcher to obtain experience in transcribing the pilot interviews and in formulating data analysis procedures. The interview participants reviewed the transcripts of their own interviews and were encouraged to make constructive suggestions regarding both the structure and nature of the questions. The researcher's thesis supervisor examined excerpts of the interview data and offered constructive advice.

The results of the pilot testing verified that the research design was viable and that the data collection instruments would yield appropriate data relevant to the study.

## Sample

The participants in this study represent individuals from three distinct organizational structures in education: provincial ministry, school district, and local school. In keeping with Bogdan and Biklen's (1982) conception of purposive sampling, this study included a variety of key actors from each of these levels, each of whom were involved in the process of changing the senior high school graduation requirements in Alberta.

At each level, one key person was identified; and, from the interview with that person, other individuals within that level were identified for inclusion. The criteria for including particular individuals was based on the belief that they could make a meaningful contribution to increasing the understanding of this change process.

The interviewees included key actors from Alberta Education, superintendents and consultants from the school system central office administration, and a member of the Board of Trustees. As well, the principal, one assistant principal, five department heads, and a counsellor from the selected high school participated in formal interviews. The interview participants were selected on the basis of their knowledge, position of authority, and involvement with the process of changing the graduation requirements.

All of the teachers in the case study school were invited to complete the teacher questionnaire in the month of January 1990. The student participants included all of the students registered in the CALM course during the first semester of the 1989-90 school year. Each student was asked to invite a parent or guardian to answer the parent form of the questionnaire. Student and parent questionnaires were also completed in January of 1990.

## Data Collection

Data for this study were collected from three sources. The primary method of data collection was through interviews with key actors. Documents including reports, memoranda, press releases, newsletters, and information handouts were the second major source of data. Responses to teacher, student, and parent questionnaires were the third major source of data.

The time span over which the data were collected varied according to the source. Documents relating to the formulation and implementation of the new high school graduation requirements, dating from the initiation of the secondary education review in 1984 through to the end of December 1991, were included in the study. Questionnaires were completed in January of 1990 while the majority of the interviews were conducted between November 1989 and

February 1990. Thereafter, supplementary interviews were conducted from time to time, as necessary, to seek further understanding of the data.

### Data from Interview Sources

Focused (semi-structured) and elite (unstructured) formal interviews were used as the primary source of data. Three distinct groups of individuals were interviewed: officials employed by Alberta Education, superintendents and consultants from the school district, and administrators and department heads at the school. Supplementary interviews were conducted with two groups of individuals: those at the school level who voluntarily sought participation in the study and those, such as Alberta Teachers' Association officials and specific interest stakeholders, who had expertise by virtue of their involvement with particular aspects of the changes in the graduation requirements. Respondents were asked to relate their perceptions of past and current realities and speculate upon future developments regarding the changing of the graduation requirements.

Dexter (1970) characterizes elite interviews as being unstructured to encourage interviewees to structure the account of the situation using the their own definition of the situation, and allowing them to introduce, to a considerable extent, their notions of what they regard as relevant, instead of relying on the investigator's notion of relevance. In essence, the investigator allows the interviewee to teach her what the problem, the question, the situation is in relationship to the purpose of the study. The objective of these interviews was to encourage individuals to freely express their understanding and specific concerns about the new graduation requirements.

Formal interviews with Alberta Education and school district officials were scheduled individually by telephone and followed up with a letter thanking the participant for consenting to become involved, introducing myself as the researcher, detailing the purpose of the study, and confirming the time and location of the appointment. In addition, each interviewee received a *Consent Agreement* form in accordance with the University of Alberta Guidelines on Ethics in Human Research. Copies of sample documents are found in Appendix A. Most interviews took place in the participant's office, although some took place in a private meeting room at the participant's work place. Confidentiality was assured in that the sources of specific information would not be revealed, although anonymity, especially of the

Alberta Education policy makers, could not be assured because of their elite profile. All references to interview data in the text of this study are reported by referring to the position of the interviewee.

At the time of the interview, the researcher provided background information about the study and gave participants an opportunity to ask questions, clarify their role in the study, and ask about specific procedures. Alberta Education and school system administration-centre personnel were asked to respond to open-ended questions and encouraged to discuss the how, what, and why of the development and communication of the policy mandate. Interview question-guides were prepared based on the research questions posed in the first chapter. A sample is found in Appendix A. The guides varied slightly according to the individual being interviewed and, in keeping with the interviewing objectives, the question-guide was not strictly adhered to. Often in telling the implementation story, the interviewee discussed several relevant matters in response to a specific question. Interviewees were encouraged to share their perceptions and, in so doing, structured their association with the implementation and their understanding of it. Most interviews were about an hour in length and were completed in a single session. However, the interview with the school principal was conducted over two one-hour periods, and two interviews with Alberta Education officials were almost two hours in length. Towards the end of the interview, the researcher checked the interview guide to ensure that all of the items had been discussed, and concluded by providing interviewees with the opportunity to make additional comments or refer to information they felt was relevant but had not been covered.

With the permission of the participants, the interviews were audio-tape recorded, with the interviewer making supplementary observations in note form. Later, interviewees received a copy of the interview transcript together with a covering letter thanking them for their participation, and asking them to review the record of proceedings, to clarify, refute, or expand on their understanding of the changes as required. One Alberta Education official declined to allow audio-recording of the interview and, alternatively, discussed policy implementation procedures in general, and later, furnished the researcher with written responses to the interview questions. As a measure of internal validity (credibility), participants from Alberta Education, the school district office, and the school were invited to review relevant components of the final document to indicate the plausibility of the results (Bohac, 1989; Guba & Lincoln, 1981).

At the school level, the strategy for conducting the interviews and distributing questionnaires involved meeting with the principal to familiarize him with the study and to establish a trust relationship (Bogdan & Biklen, 1982). Confidentiality and anonymity, both for the school and the individual participants, was assured. Pseudonyms were adopted to identify both the school and its district. In consultation with the principal, a plan was developed to introduce the study to the school staff and to make arrangements for interviews.

Focused or semi-structured interviews were the dominant method for collecting descriptive data at the school level. The focused interview (Loucks & Hall, 1975) "employs an interview guide with a list of objectives and questions, but gives the interviewer latitude within the framework of the interview guide" (p. 2). The interviewer, being intimately knowledgeable about the interview objectives, makes judgements regarding the sequencing of questions, probing more deeply, and questioning to follow up insufficient responses or issues initiated by the respondent. Bogdan and Biklen (1982) propose benefits and drawbacks to semi-structured interviews. The major benefit is that it focuses the interview on particular topics and some general questions, while offering the subject some opportunity to shape the content of the interview. The primary disadvantage of this type of interview is that we will not learn how interviewees would have structured the topic themselves. The objective of these interviews was to gather rich data filled with details and examples of the respondents' perspectives on how the new graduation requirements were affecting one school in particular.

Each school-based interviewee was contacted in person, told of the study, and invited to be interviewed. After an interview was scheduled, a letter confirming the interview and providing a copy of the *Consent Form* was placed in the interviewee's school mail slot. With the permission of the participants, the interviews were audio-taped and later transcribed. Within a month, interviewees received follow-up letters to acknowledge their contribution, provide them with an edited transcript of the interview, and set expectations about dealing with the transcript. The participants were asked to verify the transcript information as being an accurate representation of their perceptions and experiences and were given the opportunity to add further data or correct misconceptions. This prolonged engagement with the participants, together with regular peer debriefing, enhanced the trustworthiness of the data and helped to reduce researcher bias.

The interview was used to obtain information about the Levels of Use (LoU), described by Loucks, Newlove, and Hall (1975). The LoU is a generic data collection tool that was adapted for the specific innovation being studied. A copy of the LoU stages is found in Appendix E. This component of the Concerns Based Adoption Model, also known as CBAM, focuses on the knowledge, skill, and behavioral aspects of the innovators' involvement with the change. Through casual conversation during the interview, the interviewees told about their involvement in the innovation. The researcher used the information and description of behavior to rate interviewees according to set operational definitions to determine their LoU for the innovation. Hall and Loucks (1982) report that the inter-rater reliability for their instrument ranged from .87 to .96 overall, while the correlation between ethnographers' and interviewers' ratings was .98. Interview questions for school-based participants were developed from the Level of Use instrument.

### Data from Document Sources

The interview data was complemented with information from various reports, position papers, memoranda, press releases, newsletters, and information handouts from Alberta Education, the school system administrative office, and the school. These documents complemented and corroborated interview data in tracking the evolutionary process of the new graduation requirements. Quantitative data regarding specific course enrollments, student enrollments, teacher assignments, timetables from school records, and official documents on file at Alberta Education provided supplementary information. The use of multi-sources of data is known as triangulation and serves to increase the confirmability of the data.

### Data from Field Notes

Field notes are a composite of memos made by the researcher about interviews, telephone conversations, ideas, questions for further investigation, strategies, and reflections as described by Bogdan and Biklen (1982). Notes were kept with reference to all contacts with participants both formal and informal. The researcher maintained a record of this information, in combination with her observations, impressions, intuitive feelings, constructs, and emerging themes, for use as documents in the data analysis and preparation of the final document.

### Questionnaire

Within the case study school, all staff members, selected students, and their parent or guardian were asked to complete a questionnaire about the changes to the graduation requirements. Although it is recognized that this method does not yield data that is as "rich" as that obtained through interviews, this technique gave the researcher access to a greater number of subjects.

Hall and Loucks (1982) suggest that "the only way to know whether and how an innovation is being used is to assess each individual's use directly." Questioning of teachers, students, and parents provided an important indication of the understanding that these stakeholders have of the mandate. Litke (1989) successfully used a combination of interviews and questionnaires to rate the level of use of a particular educational program innovation. This study utilized a similar strategy. Open-ended questions were designed to obtain the perceptions of these individuals with respect to the new graduation requirements and permit rating their stages of concern (SoC) about the changes to the new graduation requirements.

The teacher form of the questionnaire together with covering letter and informal interview invitation is found in Appendix B. The questionnaire consisted of three parts: demographic information, general information about the new graduation requirements, and the Stages of Concern Questionnaire (SoC) developed by the Research and Development Centre for Teacher Education at the University of Texas at Austin (Hall, George, & Rutherford, 1986). The SoC are outlined in Appendix E. The general information questions sought information about teachers' understandings of the new graduation requirements, their opinions of them, and how they had personally been affected by the new requirements.

The SoC is a commonly used instrument that assesses the seven hypothesized stages of concern experienced by individuals as they implement a change. The SoC focuses on the psychological orientation of both users and non-users towards an innovation (Hall, 1979), and comprises the second dimension of CBAM (Loucks, Newlove, & Hall, 1975). Together, the LoU and SoC describe the "complex process of change as it occurs through the adoption of innovations by individuals within formal organizations" (p. 4) by assessing where individual members are in relation to the innovation. CBAM assumes that change is a process, not an event (Hall, 1979) and, therefore, as a developmental process, it takes time for individuals to adapt. A *concern* is defined as the composite representation of the feelings, preoccupation, thought, and consideration given to a particular issue or task (Hall, George, & Rutherford, 1986). Furthermore, the reality of the unique, multifaceted make-up of each individual affects how each person perceives and contends with the innovation and the issues associated with it. Hall and Loucks (1978) describe SoC as "feelings, perspectives, and attitudes of individuals as they consider, approach, and implement" (p. 204) change.

A sample of the student questionnaire is found in Appendix C. Students were asked questions relating to their high school programs, post-secondary education plans, understanding and opinions of the new high school graduation requirements, and their perceptions of the impact of the new requirements on themselves.

The parent form of the questionnaire is found in Appendix D. Two covering letters, one from the researcher and the other from the CALM teacher, accompanied each questionnaire. The questionnaire items sought demographic information in addition to parents' opinions and beliefs about the features of the new graduation requirements.

The content validity of the questionnaires was established through the pilot study and consultation with a high school administrator and a counsellor familiar with both the study and the new graduation requirements. It was evaluated during the pilot study to ensure readability, clarity, and usefulness in generating worthwhile data.

## Tests of Methodological Rigor

One of the goals of qualitative research is to describe the multiple realities of some small part of the world. In doing so, the findings must establish "trust in the outcomes of the inquiry" (Guba & Lincoln, 1981, p. 103). To be considered to be valid, many interpretive researchers contend that it is sufficient for research to be coherent and comprehensive by coordinating insights and evidence within a consistent framework (Carr & Kemmis, 1986). Guba and Lincoln (1981) suggest that the researcher can attain trustworthiness by recognizing and addressing four basic concerns:

> 1. Truth Value: How can one establish confidence in the truth of the findings of a particular inquiry for the subjects with which--and the context within which--the inquiry was carried out?
> 2. Applicability: How can one determine the degree to which the findings of a particular inquiry may have applicability in other contexts or with other subjects?
> 3. Consistency: How can one determine whether the findings of an inquiry would be consistently repeated if the inquiry were replicated with the same (or similar) subjects in the same (or similar) context?
> 4. Neutrality: How can one establish the degree to which the findings of an inquiry are a function solely of the subjects and conditions of the inquiry and not of the biases, motives, interests, perspectives, and so on of the inquirer? (p. 103)

The nature of the data collection and data analysis processes in qualitative research require particular attention to each of these concerns. In the following section, they will be discussed with relation to the strategies that were undertaken in this study to ensure that findings are trustworthy.

### Truth Value

Naturalistic studies refer to truth value as credibility. The researcher, therefore, needed to test the credibility of the findings and interpretations with the various sources from which the data were drawn. This requirement was satisfied through prolonged engagement with the participants, participant reaffirmation of the data, persistent observation, monitoring and cross-checking data through transcriptions and field notes, and peer debriefing. Triangulation, the use of multiple sources of data (Guba & Lincoln, 1982) to corroborate data, has been built into the research design through the use of interviews, documents, and questionnaires. Finally, the sources of the data, especially the interviewees, were invited to participate in "member checks" (p. 110) to verify that the data and interpretations were plausible.

### Applicability

The question of applying the results of a qualitative case study to other situations is somewhat meaningless. It was not the intention that the findings of this study be generalized to comparable situations, but rather to understand the particular "slice of life" (Guba & Lincoln, 1982, p. 116) under study. The researcher attempted to generate a thick description of this particular change process and as such, the extent to which the findings can be transferred to another setting could be ascertained only after the degree of *fit* has been assessed.

### Consistency

The reliability of the findings is described by Bogdan and Biklen (1982) as being concerned with the accuracy and comprehensiveness of the data in the study, and further, that there is congruence between the perception of the interviewee and what actually occurred in the situation under study. Triangulation, which has already been described, also strengthens the reliability. Setting up a process, that is, an audit trail, that explains the detailed process the researcher used to collect and analyze the data, would allow an outside examiner to review the decisions and consequent actions of the researcher and reach the similar conclusions. This would be a reasonable method of ensuring consistency.

### Neutrality

The concept of neutrality as it applies to naturalistic studies is through confirmability: the data should be factual and confirmable (Guba & Lincoln, 1981) so that the burden of proof is on the information, not the investigator. Nevertheless, the investigator recognizes the possibility of, and potential for, researcher bias and as a precaution consciously avoided choosing the school district and school sample from the jurisdiction that employs her. Secondly, the use of the impersonal probes model of the Concerns Based Adoption Model (CBAM) as developed by the University of Texas at Austin will help to reduce predilections by the investigator.

In summary, research studies must address tests of rigor if the findings and interpretations are to convince members of the critical academic community of their worth. Several features, including triangulation, member checks, prolonged engagement, purposive sampling, and audit trails have been incorporated into the design of this research study to increase the trustworthiness of the conclusions.

## Data Analysis

### Interview Data

After the interview data had been transcribed and verified by the interviewees, the data were analyzed according to the content analysis techniques described by Carney (1972). Carney defined content analysis as a general-purpose analytical infrastructure "for making inferences by objectively and systematically identifying specified characteristics of messages" (p. 25). In this process, all of the data were taken at face value and not subjectively interpreted. The data were always compared against some norm, standard, or theory facilitating the formulation of conclusions. Using the norm, standard, or theory, the analyst asks a series of questions using a decision tree methodology. This technique "breaks the theme or context into its component elements in such a way that these can be clearly specified, and therefore easily counted" (p. 160). In other words, as each interview transcript was examined, each unit of information was categorized according to the word, phrase, theme, or context it represented. The decision tree approach permits the sorting of data into categories by posing only one question, *"Does it go here or there?"* The analyst may also use the norm, theory, or standard to determine if the theme or context is present or not, the extent of its presence, and the extent to which it compares to other themes by asking the following questions: *"Is it there or not?" "Is there a lot or a little of this something?"* and *"How does this something compare with other somethings?"* Thus, a complex topic may be broken down into a sequence of related things. Carney also points out the advisability of noting when *something* is not there, as this may also add to the understanding of the concept.

For the purposes of this study, the interview data was categorized according to Fullan's *Factors Affecting Implementation* (1982, p. 56). The four characteristics were identified as themes for categorizing the data. The primary shortcoming of categorizing according to theme relates to the reliability in coding because themes are not always clear cut, and they are subject to the interpretation of the analyst. Having the clearest possible definition of each theme by breaking it down into component parts is recommended by Carney as one strategy useful in overcoming this objection. In this study, each of the characteristics (themes) was further coded according to one of the 15 factors (elements). This use of the decision tree approach permits the analyst to sort the data into classes by posing the question, *"Does it go here or there?"* which according to Carney, enhances reliability. In some instances, Carney acknowledges that the interrelationships are of more significance than the elemental composition and, in such situations, coding according to theme is an advantage.

As the researcher analyzed the data, every effort was made to categorize similar themes consistently. Although Fullan's 15 factors (elements) and four themes (categories) offered a starting point for content analysis, the researcher discovered that some of the elements were more useful than others in determining how data should be coded. Carney suggests that at times, no particular set of categories works best in all situations, and advises the analyst to determine the combination that best suits the research problem. The nature of this particular innovation directly affected students and their parents. The researcher's particular interest in their role in the implementation suggested the inclusion of two additional elements, students and parents, in the school level theme. Likewise, the element, external assistance, was expanded to include exogenous elements in general. For the opposite reason, the elements of teacher-teacher relations and teacher characteristics and orientations were combined as they were difficult to distinguish between.

In the process of categorizing the data, an audit trail providing sufficient evidence for an individual external to the inquiry to review the processes and results to determine if they were appropriate, reasonable, and credible was created. As a perception check, two graduate students were asked to analyze portions of several interviews using this methodology and framework. The content analysis carried out by these fellow students proved to be consistent with the analysis carried out on the same data by the researcher.

Carney (1972) states that content analysis is concerned only with questions that can be operationalized, that is, they can be posed in such a way that the results can be assessed in some form of quantification or pattern matching. After the data was categorized, it was counted. Carney advocates a flexible definition for the term "counting" which permits the analyst to begin with simple operations and proceed to more sophisticated ones. This type of counting was taken to indicate which factors were perceived by interviewees as being of most significance in the implementation process and the relationship among factors.

Questionnaire Data

Data from the questionnaires were analyzed through a computer program especially designed for this study and compilation of write-in responses. Short answer items on each of the teacher, student, and parent forms of the questionnaire were compiled through the computer program and reported according to their frequency, percentage, valid percent, and cumulative percentage. Completion items were sorted according to the question asked and reported as individual responses, primarily in Chapter 5.

The SoC items were tabulated according to the specific stage represented by the item and tallied according to the seven stages of concern. A breakdown of the SoC of each item is included in Appendix E. The SoC for staff at the school was also charted graphically according to demographic data and is presented in Chapter 5 and in Appendix F.

## Ethics Guidelines

The ethical guidelines established by the University of Alberta General Faculties Council and the Research Ethics Review Policies and Procedures of the Department of Educational Administration were followed for this research study. Participation in the study was voluntary, and individuals were offered the right to withdraw from the study as their circumstances warranted. The researcher ensured that the information supplied by participants remained confidential, and anonymity was guaranteed as stated in this proposal and in the *Consent Agreement* signed by each interviewee. (A copy of the Consent Agreement is found in Appendix A.) The consent form was designed to ensure that interviewees understood how their rights would be protected in this study. Permission of participants has been sought to include specific quotations. Data that are included in the final report have been deemed to be not harmful or embarrassing to either the participants, or their school, or school system.

Completion of questionnaires was also on a voluntary basis. It was assumed that individuals who chose not to return their questionnaires were exercising their option not to participate in the study.

To honor the commitment made to participants, the school in this case study will be referred to as Meadowview High School and the school district as

River City School District. Individuals who participated in interviews are not identified by name in reporting the findings; rather, they are referred to by their positions.

# CHAPTER 4

# CHARACTERISTICS OF THE PRESCRIBED CHANGE

Implementing the new graduation requirements was a policy action designed to achieve the values established through the *Secondary Education in Alberta* (Government of Alberta, 1985) policy. Fullan (1982) defines implementation as "the process of putting into practice an idea, program, or set of activities new to the people attempting or expected to change" (p. 54). In this study, implementing the Alberta secondary education policy through the new graduation requirements was a change mandated for Alberta students and their schools by the Government of Alberta and overseen by Alberta Education. The next four chapters deal with the four factors affecting the implementation of the policy initiative as outlined by Fullan (1982). Chapter Four gives an overview of the development and characteristics of the new graduation requirements while the fifth, sixth, and seventh chapters describe the implementation effects of the change from the perspective of key actors and stakeholders in the school, the school district, and interested external groups, respectively.

The data presented in this chapter were collected primarily from interviews and pertinent government documents. The first section presents an overview of the chronology of events and processes which describe the development of the new graduation requirements. The second section details the evolution of the nature of the changes to the graduation requirements, and examines the characteristics of the change according to the need and relevance of the change, clarity, complexity, and quality and practicality of materials as outlined by Fullan (1982). A brief discussion and analysis follows the presentation of data on each of these four factors. The chapter concludes with a discussion of the interaction between policy makers and policy implementers, and an analysis of the findings.

## Chronology of Events

This section of the chapter traces the development of the new graduation requirements by outlining the events and processes that led up to the change. The primary data sources included related correspondence, official government and Alberta Education policy statements, and internal department discussion papers. Interview data from key actors within Alberta Education, the school district, and the school are incorporated as appropriate. Table 10 presents a chronology of government and Alberta Education actions that culminated with the declaration of the new graduation requirements. The chronology provides a brief summary of the policy actions that culminated with the announcement of the new graduation requirements in 1988 to assist the reader in understanding the evolution of the process. The next component of this chapter provides a description of the evolution of the various characteristics of the new graduation requirements.

## Characteristics of the Change in the Graduation Requirements

The attributes of a change itself are considered to be one of the major factors affecting the implementation of a change (Fullan, 1982). Within this facet of implementation, Fullan suggests four major aspects that relate to subsequent implementation: need, clarity, complexity, and quality and practicality of the program. In this section, these four categories were used as the basis for data analysis. As the data were categorized, it became clear that the factors affecting clarity and complexity as they related to the changing graduation requirements were interconnected, and, are, therefore, presented together.

### Need and Relevance of the New Graduation Requirements

The effectiveness of policy implementation is related to the degree to which those affected by the change felt that the change was needed. Giving stakeholders an opportunity to have input into the process through which the policy and the policy actions are formulated may help them clarify their own beliefs about the need for change and define relevant changes. Fullan (1982) suggests that perceived relevance correlates significantly with the extent of implementation when relatively focused or specific needs are identified.

The primary impetus for changing the graduation requirements for senior high schools came from the *Secondary Education in Alberta* (1985) policy. However, two regulatory changes, the reintroduction of province-wide

Table 10

Chronology of Actions Leading to the Development of the New Graduation Requirements

| | |
|---|---|
| January 1983 | Reintroduction of province-wide examinations for grade 12, 30-level courses, on a voluntary basis. |
| Spring 1983 | Introduction of the Advanced Diploma for students who have completed the requirements of the General High School Diploma and attained a minimum mark of 50% in English 30, Social Studies 30, Mathematics 30, and one of Biology 30, Chemistry 30, or Physics 30. |
| January 1984 | Students are required to complete province-wide diploma examinations in order to earn credits in seven grade 12, 30-level courses and a high school diploma. The final grade is based on a blended mark comprising 50% of the examination mark and 50% of the teacher-awarded mark. |
| February 1984 | Minister of Education's Official Announcement of a review of the secondary education program. |
| June 1985 | *Secondary Education in Alberta* policy announced by Premier Peter Lougheed and Minister of Education, David King. |
| February 1986 | *Secondary Education in Alberta Policy Statement: Issues and Implications for the Senior High School Program* (Popowich & Prather) analyzed the task of translating the policy goals and directional statements into a comprehensive high school program. |
| September 1986 | A passing grade of 50% becomes mandatory to earn credits for all high school diploma courses. |
| June 1987 | Alberta Education releases the *Proposed Directions for Senior High School Programs and Graduation Requirements,*(1987a), a discussion paper on the proposed changes, and invites stakeholder groups to provide input. |
| February 1988 | Alberta Education releases an information bulletin, *Senior High School Graduation Requirements and Program Development Update*, detailing the new requirements for high school diplomas. |
| September 1988 | Students entering grade 10 are required to complete the new graduation requirements to attain a high school diploma. |

examinations for academic subjects and the introduction of the Advanced Diploma, preceded the policy statement. These changes were incorporated into the secondary education policy statement and were reiterated in the new graduation requirements. A third regulation pertaining to the raising of the passing grade for awarding of credits was introduced in the secondary education policy, but was implemented in advance of the new graduation requirements.

The diploma examinations. Of major importance was the reintroduction of compulsory diploma examinations in matriculation subjects. These examinations were discontinued in 1972 and had previously accounted for 100% of a student's final mark in grade 12 subjects. Between 1976 and 1982 cyclical achievement tests were administered throughout the province to monitor student achievement, but the results of these examinations had no bearing on final marks. In January and June of 1983, province-wide examinations were reintroduced on a voluntary basis; and, in January of 1984, students were required to write the appropriate diploma examination to receive credit in up to seven courses. Alberta Education indicated that these examinations were "an integral part of the high school diploma requirements, [and were] intended to develop and maintain excellence in educational standards through certification of academic achievement" (Alberta Education, 1984c, p. 2). The new version of examinations are distinct from their predecessors, the *departmentals*, in that they are called *diploma* examinations, and the student's final mark is a blended mark composed of 50% of the mark achieved on the examination and 50% of the teacher-awarded mark. An Alberta Education official viewed the blended mark as increasing the credibility of the examinations because students were assessed according to both their classroom learning experiences and a standardized examination.

The Advanced Diploma. The concept of an Advanced Diploma evolved from the Comprehensive Education Certificate, the purpose of which was to "certify the degree of academic achievement attained by well-motivated and achieving students graduating from high school in four major discipline areas: (1) Language Arts, (2) Mathematics, (3) History and Social Sciences, and (4) the Physical and Biological Sciences" (Alberta Education, 1982, p. 26). There is no reference to an Advanced Diploma in the *Junior-Senior High School Handbook* prior to 1982-83. The *1983-84 Junior-Senior High School*

*Handbook* (Alberta Education, 1983) gives notice that the certificate is "presently under review" (p. 20), but offers no further indication of projected changes.

Notice of the institution of the Advanced Diploma was formalized through an undated announcement (circa 1983) from the Student Evaluation Branch of Alberta Education to superintendents and high school principals. It indicated that

> Commencing September, 1983 an Advanced High School Diploma will be awarded to students who have completed the requirements of the General High School Diploma with a minimum mark of 50% in the following Grade 12 courses:
> 1. English 30
> 2. Social Studies 30
> 3. Mathematics 30
> 4. One of Biology 30, Chemistry 30 or Physics 30. (p. 1)

The *1984-85 Junior-Senior High School Handbook* indicates that "Alberta Education issues two distinct high school diplomas" (Alberta Education, 1984, p. 23) and lists the requirements for the Advanced Diploma as being identical to those listed in the earlier handbook. No further changes occurred in the Advanced Diploma requirements until September of 1988 when the new graduation requirements came into effect. Initially, the Advanced Diploma seemed to be a name change from the former Comprehensive Education Certificate.

Raising the passing grade. The third regulation change, the raising of the passing grade, occurred in the year following the release of the *Secondary Education in Alberta* (Government of Alberta, 1985) policy. It originated with the policy statement and was introduced as policy action in the *1986-87 Junior-Senior High School Handbook* (Alberta Education, 1986). In order to receive credits in every course, students were required to obtain a minimum grade of 50%, an increase from the previous 40%. This policy action became a major component of the new graduation requirements.

These three policy regulations formed the foundation for the development and the implementation of the new graduation requirements. In introducing these changes, Alberta Education's strategy included minimizing the disruption to school practice, retaining the positive features of existing programs, and minimizing the negative impact on school-based personnel (Popowich & Prather, 1986). Continuation of these three innovations was relevant to the implementation of the new graduation requirements in that educators were familiar with and had generally accepted the basic concepts.

The role of the secondary education policy in establishing the need for change. Bosetti (1986) identified Premier Lougheed's determination to make education a top government priority as the most significant factor influencing the initiation of the secondary education review. The Government of Alberta had persistently addressed the very substance of education since the 1978 adoption of the Goals of Basic Education for Alberta. Bosetti identified six additional factors that were influential in generating the need for change, including a perceived discontent and lack of confidence with the secondary education system, the need to prepare students for the 21st century, the perceived shift in emphasis from an input orientation to a more output orientated results system, and the need to establish a unified, reliable structure for secondary education. During the same period the need for educational reform was being espoused nationally and internationally, and Alberta Education's Curriculum Policies Committee became very concerned with the direction of education. In February 1984, the Minister of Education, David King, appointed an advisory committee to review secondary education and make recommendations for future directions and development.

The Premier of Alberta and the Minister of Education jointly announced the new secondary education policy in June of 1985. The proclamation followed 18 months of a consultative process that included study and input from a variety of sources throughout the province, various research investigations, a Gallup poll, and a province-wide survey. According to Bosetti (1986), three different groups each proposed a final draft of the policy document: the Project Team, the Director of Curriculum, and the Minister of Education's Advisory Committee. The Deputy Minister of Education then created one comprehensive draft, which was submitted to the Minister of Education and his Advisory Committee for further comments and revisions before the final policy was formulated. Even though stakeholder groups presented conflicting views and demands, the policy formation process was successful in achieving "a balance between conflicting demands" (Bosetti, 1986, p. 125). In achieving this balance, one senior educational official indicated that some compromises were made and that

> a lot of areas were fairly wide open to interpretation and that in my viewpoint was deliberate, because in some cases we did not want to spell out the end outcome, in other cases we wanted to have more debate. It is very strong on the front end and as you get further and further into the document, it becomes less directive in the latter sections. It was clearly understood that more input from the stakeholders was needed in critical areas.

Although a conscious effort was made to involve the public in the formulation of the Alberta secondary education policy, Bosetti found (1986) that the final policy statement exhibited characteristics of the elite theory of policy making, that is based on "whatever governments choose to do or not to do" (Dye, cited in Bosetti, 1986, p. 123).

The policy statement was intended to reflect the government's "commitment to improving secondary school programs, classroom instruction, and student learning" (Alberta Education, 1987a, p. 1). Eight guiding principles for secondary education were enunciated (Government of Alberta, 1985):

1. Purpose of Secondary Schools
   The secondary school, in cooperation with other agencies in society, must assist each student to become a competent, confident, and responsible individual. However, the secondary school must assume primary responsibility for the intellectual development of each student and for fostering the desire for lifelong self-directed learning.
2. The Instructional Program
   The development and implementation of the instructional program must take into account the following considerations:
   * the nature and needs of the learner
   * the nature and needs of a changing society
   * the nature of knowledge in each subject area
   * the learning environment.
3. Citizenship
   Secondary schools must prepare students for responsible citizenship in a society which is changing constantly. The best preparation for students to enable them to anticipate and shape the future is a broad general education with emphasis on critical and creative thinking, communication, personal development, science and technology, and an understanding of the community.
4. Values and Ethics
   Secondary schools must assist students to recognize principles and develop values that enhance responsible moral and ethical behavior.

> 5. Educational Partnership
> Opportunities must be provided to involve the community in secondary education programs and to recognize and support learning experiences that take place outside of schools.
> 6. The Use of Technology in Secondary Schools
> The secondary education system must use technology to enhance learning and to facilitate access to equitable educational opportunities for all students, regardless of ability, circumstance, or location.
> 7. Diverse Educational Needs of Students
> Secondary education programs must recognize and must be adapted to meet the wide range of needs and abilities of students.
> 8. Continuous Review
> The purposes, goals, content, and delivery of secondary education must be reviewed on a regular basis to ensure that innovation and excellence are fostered, and that the changing needs of students and society are met. (pp. 7-9)

The policy statement linked these principles of secondary education with the previously adopted aim of education, that is "to assist students to make informed choices that will improve both their own lives and that of their community" (p. 7). Once the government had adopted its policy for secondary education, Alberta Education initiated action to change the graduation requirements to ensure that they were consistent with the new policy.

Discussion regarding need and relevance of the change. The mandate for changing the graduation requirements originated with the secondary education policy adopted by the Alberta government. Alberta Education undertook the development of the new graduation requirements to comply with the government policy. While it can be argued that there were numerous reasons for reviewing the secondary education policy, the need to restructure the graduation requirements arose from the secondary education policy itself in a cause-effect type of relationship. In other words, because Albertans were involved in studying secondary education, and were more or less aware of the broad factors leading to the adoption of the secondary education policy, Alberta Education surmised that society was also aware of the need to change the requirements for high school graduation.

Aside from the obvious policy compliance issue, there was a secondary need to consolidate previous initiatives within the new graduation requirements. Changes to the diploma structure, the process for awarding credits for academic subjects, and raising the passing grade are indicative of what Dunn (1981) refers to as prospective policy analysis, "the production and transformation of information *before* policy actions have been adopted" (p. 60). With the exception of raising the passing grade, this study did not establish a relationship between reinstitution of province-wide examinations and the establishment of two graduation diplomas as being the result of an overall plan. Rather, they seemed to be the result of incremental planning at Alberta Education. Nevertheless, the *Secondary Education in Alberta* (Government of Alberta, 1985) policy, and, subsequently, the new graduation requirements built upon these changes by incorporating them into the more comprehensive secondary education policy implementation plan.

Each of these three changes were mandated in the classical/control tradition of a managerial model of policy implementation. Alberta Education assumed the role of superordinate and used its legal authority to establish new regulations. Because the responsibility for granting credits and awarding diplomas was well defined and well accepted as being within Alberta Education's jurisdiction, stakeholder reaction was minimal and the regulations were quickly institutionalized.

### Clarity and Complexity of the Changes to the Graduation Requirements

Defining the goals and means to achieve change is a problem critical to implementation (Fullan, 1982). Implementers must be clear about what it is that they will be doing that is different, or "what it means in practice" (p. 57). In developing the policy action, Alberta Education's first step was to review the secondary education policy and propose changes to the graduation requirements. During the second phase of developing the new graduation requirements, key stakeholders were invited to provide reaction. In the final stage, Alberta Education finalized the graduation requirements as legal regulations. The new requirements provided a very specific and detailed implementation plan defining what was expected and when it was expected.

Change can be studied from the perspectives of the difficulty, skill required, and extent of alterations in beliefs, teaching strategies, and use of materials. The difficulty and extent to which the implementer is required to adjust in order to implement the change is referred to as the complexity of the change (Fullan, 1982). While simple changes may be easier to implement, more complex changes have been found to achieve greater benefits, as long as the implementation strategy defines components clearly and implements them incrementally. An initial examination of the new graduation requirements gives the impression that they were simple, straightforward changes. The phase-in incremental time line was clearly indicated and implementers were left with the impression that implementation could be achieved by following the time line. The action plan became complicated as previously unasked questions were posed, curriculum and resources were found to be unavailable, and Alberta Education made adjustments in response to the concerns of stakeholders.

Development of the new graduation requirements. The new policy for secondary education in Alberta had major implications for high school graduation requirements in the province. The *Secondary Education in Alberta* (Government of Alberta, 1985) policy was developed over a period of 16 months. However, there was a 32-month lapse between when the policy was announced and when the new requirements were announced. Several factors contributed to the delay, including the resignation of Premier Lougheed and the selection of Don Getty as his replacement. Additionally, during this period, the portfolio of Minister of Education was held by three different individuals. There were a number of retirements among the senior ranks of Alberta Education, and the senior bureaucratic structure of the department was reorganized. Finally, as mandated by the policy, each of the core academic subject areas was reviewed to determine how it would contribute to the achievement of the goals of the policy, and what changes were required to ensure that the program would be viable in the future.

The first step in implementing the secondary education policy and developing the new graduation requirements was a review of the core courses. The broad aim of *Secondary Education in Alberta* (Government of Alberta, 1985) and the goals of secondary education provided the framework for the review and development of instructional programs to ensure that the key principles and other directive statements were "deliberately and systematically covered in the compulsory courses" (Alberta Education, 1987a, p. 2) and to determine what changes were necessary. Proposals for course and credit changes in science, mathematics, social studies, English, and all of the core areas were developed. Changes in complementary courses--for example, business education and vocational education--were not a high priority, although an Alberta Education source indicated that "it was recognized that these programs in their present forms would not meet the needs of the next century." The program review results provided the foundation for structuring the new graduation requirements and assisted Alberta Education to develop an implementation schedule according the program development needs.

The Director of the Curriculum Design Branch stated in a letter to the researcher that the graduation requirements were not a separate policy. He went on to say that they were based on the directions set out in the secondary education policy. Furthermore, the policy did not provide all of the details of the course and credit requirements so personnel within the department were assigned to prepare a discussion paper outlining the implications of implementation of the policy. This took place concurrently with the program review. Popowich and Prather (1986) developed a discussion paper that outlined the issues and implications of the secondary education policy for the senior high school program. Specifically, one of the authors indicated that their task was to "analyze the issues which would have to be addressed over the coming years to complete and to bring closure and firm direction, relative to those more open ended questions" of the policy statement. The authors determined that a comprehensive educational program would be based on the directive statements mandated by the policy statement (Popowich & Prather, 1986):

> * students will be provided with a well-balanced, comprehensive education
> * program organization will follow a core and complementary format
> * each course will be composed of required and elective components
> * differentiated programs will be available to meet the requirements of the General and Advanced Diplomas and the Certificate of Achievement
> * programs will develop basic concepts, skills, and attitudes in a positive learning environment
> * programs should provide all students with choices and flexibility in meeting personal and career aspirations. (p. 2)

These were the areas that, according to a senior Alberta Education official, "were not open to debate" because they were defined in the June 1985 government policy on secondary education. In fact, he explained that it was an Alberta Education strategy to defend the policy as a government policy, debated and approved by the politicians with input from the public, and as such, because it reflected the will of the people, it was not to be debated again as an educational statement. Nevertheless, he went on to indicate that

> the educational community still wanted to debate; they had not necessarily accepted that the direction [established by the secondary education policy] was appropriate, or that it was set, and it came down on several occasions that the Assistant Deputy Minister of the day had to say, "that's not an area for debate. If you want to debate that, you have another vehicle, write your MLA."

Popowich and Prather (1986) identified 24 discussion issues and implications with reference to the policy statement. Among the issues studied were allocating core and complementary program credits within each diploma route; ensuring that program definitions met students' personal and post-secondary needs; addressing differences in students' backgrounds, abilities, aptitudes, and learning styles; ensuring that students acquired the essential knowledge, skills, and attitudes; determining the place of Career and Life Management (CALM) in the diploma; and determining the emphasis curricular programs should place on technological literacy. A senior official suggested that a major issue centered on the whole philosophical orientation of what our schooling ought to be, a liberal arts program, a job/career training program, or an academically oriented program for post-secondary preparation. These considerations gave support to the dual diploma structure.

An Alberta Education official indicated in an interview that the discussion paper was circulated internally within Alberta Education and stimulated further debate regarding the articulation of programs, proposed program revisions, teacher inservice and preservice programs, and the secondary education policy's effect on the expectations that post-secondary institutions have of graduating students (Alberta Education, 1987a). The ongoing discussion among senior bureaucrats resulted in the development of a paper outlining proposed directions for programs and graduation requirements for high schools.

In addition to the internal discussion paper developed by Popowich and Prather (1986), formal (written) and informal advice and suggestions from the Senior High School Program Coordinating Committee, subject advisory committees, and teachers, school administrators, trustees, and other Albertans were received by Alberta Education. According to one senior official, the viewpoints of these stakeholders were also considered in making decisions about the new graduation requirements. Some of these documents were an integral component of the data in this study and have been introduced, as relevant, throughout the presentation of the data.

At the same time as the program review and the issues and implications paper was being developed, Alberta Education undertook the development of the core courses that would be necessary for the implementation of the new requirements. Career and Life Management (CALM) was considered the most significant new course, and it had a very ambiguous reference. According to the line officer responsible for CALM,

> a lot of money and effort was put into the program so it would be in for September '87. We could not allow that course to fail because it would then jeopardize the acceptance and overall initiatives of program changes across the board.

Concurrently, work began on the development of the General Science program, the Science 12/22 program, and revisions to the Chemistry 20/30, Biology 20/30, and Physics 20/30 curricula. These were important signals to educators across the province because they showed that Alberta Education was serious about the proposed changes.

The proposed new programs and graduation requirements. The preliminary paper, *Proposed Directions for Senior High School Programs and Graduation Requirements* (Alberta Education, 1987a) and henceforth referred to in the text as *Proposed Directions*, was released in June 1987 and was circulated to Albertans for their consideration and comments (Symyrozum, 1990). The Director of Curriculum indicated that involving Albertans throughout the entire process was designed to increase knowledge and understanding of proposed changes over a long period of time and would facilitate implementation.

The timing of the document's release (mid-June 1987) and the deadline for responses (September 30, 1987) coincided with school closing, summer vacation, and school opening activities, and created suspicion among some groups. The Alberta Teachers' Association (ATA), for example, noted that teachers might not become aware of the document and, therefore, might fail to provide input by the September 30, 1987 deadline. Pressure from the ATA resulted in an extension of the deadline to October 31, 1987.

The two diploma routes, the General High School Diploma and the Advanced High School Diploma, were maintained and the number of mandatory courses required to obtain them was increased. One official indicated that a two-diploma structure would "provide a better opportunity to meet the needs of individual students and recognize excellence" for the majority of high school students. The *Proposed Directions* paper claimed that both routes would ensure that students would receive a broad general education and fulfil the objectives for secondary education as described in the policy statement. The key difference, as explained by one official, was the belief that a solid core, extended through alternative sequences, fundamentally met the requirement of a broad general education. A third route, the Certificate of Achievement through the Integrated Occupational Program, was introduced for students who were experiencing difficulty in learning and would normally be unable to achieve a General Diploma (Alberta Education, 1987a). The highlights of the *Proposed Directions* paper include the following:

> * maintained the increased pass standard from 40% to 50%
>
> * increased course requirements for the General High School Diploma to include Career and Life Management (CALM), a grade 12 social studies course, and an additional course in each of mathematics and science
>
> * introduced course requirement for CALM and a Category "C" sequence for a minimum of 10 credits for the Advanced Diploma
>
> * maintained a minimum of 3 credits for each course
>
> * introduced alternative course sequences in Social Studies 13, 23, and 33 and General Science 10, 20, and 30 with diploma examinations for each of the 33- and 30-level courses
>
> * introduced an "incomplete standing" for students who have not completed course expectations
>
> * increased specificity of course content in the required component of courses and accommodated individual differences through the elective component in all courses. (p. 3)

The *Proposed Directions* paper outlined a time line for phasing in the new requirements beginning in September of 1988. The mandatory implementation schedule for the new senior high school courses was proposed as follows:

| | |
|---|---|
| 1988-89 | Social Studies 10/13<br>Science 12<br>Physical Education 10 |
| 1989-90 | CALM<br>Social Studies 20/23<br>Mathematics 10/13/12*<br>Science 22*<br>various complementary courses |
| 1990-91 | Social Studies 30/33<br>Mathematics 20/23/22*<br>General Science 10<br>English 10/13<br>various complementary courses |
| 1991-92 | Mathematics 30/33/31<br>General Science 20<br>Biology 20, Chemistry 20, and Physics 20<br>English 20/23 |
| 1992-93 | General Science 30<br>Biology 30, Chemistry 30, and Physics 30<br>English 30/33 (p. 5) |

* Subsequently, all courses ending with "2" were renumbered to end with "4"

Presenting specific information about what the changes were to be, and when they were to occur, was Alberta Education's attempt to achieve what Fullan (1982) defined as *clarity*.

The proposed General High School Diploma. The proposed General High School Diploma was acknowledged "to provide students with more opportunities to pursue and develop individual aptitudes and interest in a variety of complementary program areas" (Alberta Education, 1987, p. 6). In bold print, it was pointed out that students could qualify for post-secondary entrance by carefully selecting their courses. This diploma program proposed to provide students with the opportunity to

> acquire specialized knowledge for direct entry into the work force, participate in and experience a wide range of programs to fulfil personal interests or aspirations, and allow direct entry into post-secondary institutions. (p. 6)

Students were to achieve a total of 62 specified credits with a minimum of 100 credits to receive the General High School Diploma.

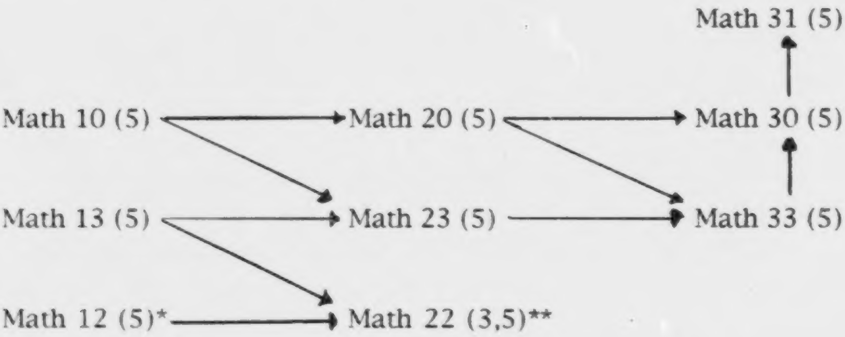
The proposed Advanced High School Diploma. The proposed Advanced High School Diploma was a more rigorous program of study that required the completion of 76 specified credits including a Category "C" provision that required students to complete a two- or three-course sequence to the grade 12 level course. This program was designed "for students who wish to extend and refine their knowledge and intellectual skills toward achieving a more theoretical and abstract base of understanding for specific career pursuits" (Alberta Education, 1987, p. 7). Regarding the three specialized science courses, the *Proposed Directions* paper recommended that each of Biology 20, Chemistry 20, and Physics 20 be available for five credits. This diploma had a very strong academic component with fewer opportunities for students to select complementary options. However, a senior Alberta Education official stressed that 100 credits was a minimum, and that most students achieve more than the minimum of 100 credits, the average being about 108 with some students achieving over 120 credits. These supplementary credits can be earned in the courses of a student's choice and, therefore, opportunities to select complementary or special interest courses are feasible. The official maintained that students would continue to achieve more than the minimum requirement. So the specified mandatory number of course credits were not a problem as far as the government was concerned.

In keeping with the policy statement directive, core programs were reviewed, new programs were proposed, and others were scheduled for revision. A comprehensive course designation was adopted in the program update. Courses ending in "0" indicate the highest degree of academic challenge or difficulty; those ending with "3" are less academically challenging or difficult, and those ending in "4" are the least academically challenging or difficult. Those designations at the 10-20-30, 11-21-31, and 12-22-32 levels retained their traditional meaning. The 13-23-33 designation was used to indicate those courses that have less academic challenge than the 10-20-30 designation, while the 14-24 courses were to be less challenging academically than the 13-23-33 courses. Courses with the designations 15-25-35 were to be reserved for locally developed courses, while courses ending with "6" were to be used exclusively to designate Integrated Occupational Program courses. In keeping with the course designations, Science 12-22 and Mathematics 12-22 were renamed Science 14-24 and Mathematics 14-24 respectively. Adopting a common numbering structure was further evidence of Alberta Education's attempt to standardize and clarify the goals of program levels.

Alberta Education attempted to clarify the articulation sequences for social studies, science, mathematics, and physical education and proposed transfer points between the Certificate of Achievement and the General High School Diploma. In essence, these program models demonstrated the relationships of courses both within each of the various streams of a sequence and between sequences. The program models were designed to permit greater flexibility between streams to accommodate differences in students' ability and learning needs. It was proposed that students who earned less than 50% in a course could, with their principal's permission, advance to the next level of the less challenging course sequence. Further, if the student achieved a grade of 50% or better in that course, credit for the previous course in that sequence would automatically be awarded. This concept was known as the granting of retroactive credits. Table 11 illustrates the Proposed Mathematics Program Model and is representative of the articulation sequence.

Table 11

Proposed Mathematics Program Model



* Ultimately, this course became Math 14.
** Ultimately, this course became Math 24.

The *Proposed Directions* paper also documented the content and focus of each sequence to assist students to select the course appropriate to their abilities and interests.

In spite of the government's rational approach, controversy continued to plague the proposal. According to one official,

> in the policy statement there were areas that were perceived by the field to be in direct contradiction to one another. The philosophy and general aims were seen as promoting a great deal of flexibility and choice. The section dealing with the requirements for high school graduation were perceived to be highly structured and directive. It was also evident to the field that not all of the issues outlined in the discussion statement could be translated directly into planned program changes. A number of statements were less clear than others regarding the direction to be taken in establishing program outlines and standards. It was apparent to program planners that a great deal of controversy would surround any future direction in such areas as values and ethics. The opposite was true in areas where directives for course content were more specific.

Opening the policy action plan to discussion by all Albertans brought forth viewpoints covering the entire spectrum of the continuum. Some Albertans, primarily those outside of the educational community, believed that the proposed requirements were not rigid enough. An Alberta education official believed that opinion within the education community was divided; those educators involved in the core programs tended to support the changes, while those affiliated with the complementary courses claimed the new requirements were too rigid. In the fall of 1987, Alberta Education officials made themselves available to the stakeholder groups to discuss the proposals. One official, assigned to the speaking circuit, stated that he encountered very strong opposition to several sections of the proposal from educational stakeholders. An Assistant Deputy Minister at Alberta Education, on the other hand, received input from agencies outside the education system stating that Alberta Education had not gone far enough. They expected all 100 credits to be specified. Feedback from concerned Albertans covered the entire continuum.

Officially, the department defended the government's policy and the policy intent, but informally, the situation was different. A high-ranking official acknowledged that there were problems with the proposal that the department recognized and was trying to adjust at the same time as it tried to honor the government's policy as well as it could. This official felt that the major challenge was attempting to change attitudes. He cited high school administrators in particular as being "the most conservative group, preferring to maintain the status quo and being unwilling to change."

Although the time provided for feedback and debate was limited, Alberta Education received strong, emotional reaction from various stakeholder groups. One official contended that

> the debate could have gone on forever. However, the department believed that they would not be able to satisfy everyone and decided to move forward with the changes by adhering to the principles of the policy.

The feedback was assembled and reviewed by the High School Program Coordinating Committee. Among the recommendations the committee brought forward was a return to a single diploma with specialization certification. Alberta Education officials rejected this suggestion on the grounds that it was in opposition to the secondary education policy statement, and put forth a revised final paper that was relatively unchanged from the *Proposed Directions* document.

The new graduation requirements. On February 19, 1988, an information bulletin, *Senior High School Graduation Requirements and Program Development Update* (Alberta Education, 1988a), was circulated to all school superintendents and junior and senior high school principals. (This document will be referred to as *Requirements and Update*.) Although this was labelled an information bulletin, the senior Alberta Education official responsible for the new requirements acknowledged that they were, in fact, the regulations. In his covering letter, the Assistant Deputy Minister of Student Programs and Evaluation (Palmer, 1988) indicated that additional information would be provided in the spring through the *1988-89 Junior-Senior High School Handbook* (Alberta Education, 1988b), and requested the cooperation of principals and school superintendents in ensuring that school staff were made aware of the changes. He noted that several topics, including incomplete standing and alternatives to the Carnegie Unit, were still under review. Although there had been a two-year period between the announcement of the policy in June of 1985 and proposed new graduation requirements in mid-1987, the time period between the finalization of the new requirements, February 1988, and their mandatory implementation, September 1988, was remarkably short. At least one official projected that the time frame could lead to difficulties "in view of the fact that new programs had to be in place to support the changes."

Probably the most significant aspect of the *Requirements and Update* was that implementation strategy time lines were outlined in detail. Although the *Proposed Directions* document included a tentative phase-in time line, the update document confirmed and expanded upon the implementation schedule. Essentially, students entering grade 10 in September of 1988 would be subject to the new graduation requirements, while students entering grade 11 or 12 would follow the previous requirements, although they would be allowed access to new courses.

Educators had only one major source of information about the new requirements: the *Requirements and Update*. Although Alberta Education provided the information and encouraged school officials to familiarize personnel with it, there is evidence that in some cases the information either did not get through or the individuals receiving it did not fully comprehend the substance. There were no plans for inservice events to assist jurisdictions with the implementation. The regional offices of Alberta Education were available to provide further information to school jurisdictions and schools on an individual request basis. Subsequent adjustments to the graduation requirements created further confusion for the students, parents, and administrators attempting to become familiar with the new graduation requirements. This created an example of what Fullan (1982) defines as a problem related to clarity, that is, goals and means: users are not able to identify the essential features of the innovation. Lack of clarity is a perennial problem in the change process and represents a major problem at the implementation stage.

Aside from the inclusion of phasing-in schedules, the *Requirements and Update* was similar in format and content to its precursor, *Proposed Directions*. The General High School Diploma was scheduled for implementation over a two-year period, while the Advanced High School Diploma was to be phased in over a three-year period. The Assistant Deputy Minister responsible for the program implementation indicated the reasoning behind the phase-in strategy.

> [It] came about because we were limited in terms of the pace of change of the various courses. We couldn't change the requirements until the appropriate courses were in place. You couldn't make social studies compulsory for all three years until we had Social Studies 13, 23, 33 in place. It was very difficult to change the science requirements until we had a new pattern of science courses. So the changes in the graduation requirements are being introduced as rapidly as possible, consistent with the development of appropriate courses to enable children to satisfy those requirements.

Table 12 outlines the General High School Diploma Requirements and the phase-in schedule, and Table 13 provides the equivalent information regarding the Advanced Diploma. The first column on the left refers to the previous requirements, while the three columns on the right show the phase-in schedule for implementing the new graduation requirements.

Essentially, the course/credit requirements for the Advanced Diploma remained unchanged, except in the area of science. The number of credits allocated to the Chemistry 20, Physics 20, and Biology 20 courses had been reduced from five credits per course to three credits per course. The change was attributed to lobbying and concern expressed by various groups regarding program flexibility when all four science courses at the grade 11 level could only be offered for five credits each. Although the number of science credits mandated for an Advanced Diploma was reduced to 11 credits for 1988-89 and 1989-90, the credit requirement reverted to 15 credits in 1990-91. Reducing each of the three specialized science courses to three credits permitted more flexibility in scheduling and allowed time in a student's timetable to permit him or her to select other courses.

Enrollment statistics (Alberta Education, 1987b) show that the majority of students in the Advanced Diploma route enroll in two or more specialized sciences in order to meet post-secondary entrance requirements. This trend was expected to continue under the new graduation requirements, thus further reducing students' opportunities to access complementary courses. The use of the term *advanced* to describe the more academic, rigorous diploma was one of the "givens" mandated by the policy.

According to a senior Alberta Education official, the "Senior High School Coordinating Committee debated the issues related to the dual diploma structure prior to the release of the *Proposed Directions* paper and recommended a return to a single high school diploma with some certification of specialty." This recommendation went forward through the Curriculum Branch to the Director of Curriculum, to the Curriculum Policy Committee and finally to an internal Alberta Education Committee chaired by the Assistant Deputy Minister of the day who said, "No, that's a given, we are not going to entertain any debate on going back to one diploma or a change in name." The decision not to return to a single diploma structure was made because, in the words of the current Assistant Deputy Minister, it was "just unacceptable to the

Table 12

General High School Diploma Requirements*

| | CREDITS | | | |
|---|---|---|---|---|
| | 1987-88 | 1988-89 | 1989-90 | 1990-91 |
| CORE | | | | |
| English | 15 | 15 | 15 | 15 |
| Social Studies | 10 | 15 | 15 | 15 |
| Mathematics | 5 | 5 | 8 | 8 |
| Science | 3 | 6 | 8 | 8 |
| CALM | 0 | 3 | 3 | 3 |
| Physical Education | 2 | 3 | 3 | 3 |
| ADDITIONAL REQUIREMENT | | | | |
| 2 grade 12 level courses | 10 | 10 | 10 | 10 |
| SPECIFIED CREDITS | 45 | 57 | 62 | 62 |
| UNSPECIFIED CREDITS | 55 | 43 | 38 | 38 |
| MINIMUM CREDIT REQUIREMENT | 100 | 100 | 100 | 100 |

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* Alberta Education. (1989a). *Guide to Education: Senior High Handbook, 1989-90.* Edmonton: Author.

Table 13

Advanced High School Diploma Requirements*

| | CREDITS | | | |
|---|---|---|---|---|
| | 1987-88 | 1988-89 | 1989-90 | 1990-91 |
| CORE | | | | |
| English | 15 | 15 | 15 | 15 |
| Social Studies | 15 | 15 | 15 | 15 |
| Mathematics | 15 | 15 | 15 | 15 |
| Science | 11 | 11 | 11 | 15 |
| CALM | 0 | 3 | 3 | 3 |
| Physical Education | 2 | 3 | 3 | 3 |
| COMPLEMENTARY | | | | |
| Category "C" Sequence** | 0 | 10 | 10 | 10 |
| SPECIFIED CREDITS | 58 | 72 | 72 | 76 |
| UNSPECIFIED CREDITS | 42 | 28 | 28 | 24 |
| MINIMUM CREDIT REQUIREMENT | 100 | 100 | 100 | 100 |

* Alberta Education. (1989a). *Guide to Education: Senior High Handbook, 1989-90* (p. 16). Edmonton: Author.

** Students must earn no fewer than 10 Category "C" credits. Whether two or three courses, the sequence must culminate at the grade 12 level. In general, Category "C" courses include a second language, art, drama, music, industrial education and its associated options, business education courses, and home economics courses.

vast majority of the public." He also indicated that the decision was "a political compromise in terms of how we can have as clear a requirement as possible, maintain our standards as high as possible, but also provide an opportunity for various groups of kids to feel success." Furthermore, he suggested that the labels of *general* and *advanced* seem to be of interest only to educators. He speculated that the business community would not be able to understand the difference between the two types of diplomas. He felt that "business just wants a high school diploma." Another official admitted that the dual diplomas caused Alberta Education "all kinds of problems because unintendedly, it gave a connotation of elitism for the academic and that was not intended."

Alberta Education underestimated the kind of reaction that was eventually generated as a result of the dual diplomas. The intent of the Advanced Diploma was to meet the needs of the 30% of academically inclined students. It was designed to stand side by side with the General Diploma that was designed to meet the needs of 60% of students who were of average ability. One official suggested that the Advanced Diploma became stigmatized first by the meaning of the word *advanced*, and second by its perceived association with the historical term *matriculation*. The department tried to emphasize that with careful course selection either diploma would qualify a student for entrance into post-secondary institutions (Alberta Education, 1988a). Despite this, students opted for the more rigorous academic program not only because of the status associated with it, but also because of the perceived crisis of increased entrance requirements and enrollment quotas at various post-secondary institutions.

The Category "C" options were introduced in the policy statement (Government of Alberta, 1985) to ensure that Advanced Diploma students obtained "a broad base of knowledge, skills and attitudes in a variety of subject areas" (p. 24). Ten course credits in any sequence of a language other than English, a fine arts course, or selected practical or technical arts courses qualified as C options.

A communications package, designed to explain program changes to students and parents and to school administrators and to help them plan their high school program, was scheduled for release in May 1988. Two resources, a booklet and a video both entitled *A Credit to Yourself: Planning Your High School Program*, were made available late in the spring of 1988. School jurisdictions could obtain access to the colorful 12-page booklet in quantity (Alberta Education, 1989a), while one copy of the 20-minute video was sent to every high school in the province (Alberta Education, 1989b). Stiles (1989) indicated that Alberta Education had "done a good job in putting out information about the program changes" (p. 4). Alberta Education continues to publish an annually updated version of the *"A Credit to Yourself"* booklet, and, although usage varies, those school and district personnel using it considered it to be of value to students about to enter high school.

Subsequent adjustments to the new graduation requirements. The new graduation requirements were revised several times since they were first announced in February of 1988 creating further confusion about how the requirements were to be implemented. School-based administrators and counsellors were concerned about having the latest information from Alberta Education to advise students about their programs. One senior administrator in the school jurisdiction summed it up this way:

> I think part of the problem with the requirements is that there appear to have been changes along the way. When those requirements first came out, we all understood exactly the kinds of courses kids would have to have, but there appear to have been changes, so I think that students entering grade 10 might not have to fill the requirements they thought they would have to fill. So there has been a lot of confusion.

Although Alberta Education and the government communicated revisions to the requirements in various ways, it was always with the assumption that the message got through to the appropriate personnel. Unfortunately, there was always a lag in the time until the message got through and could be acted upon. School administrators and counsellors organized for instruction and advised students using the most current information they had, and they could only hope that their actions were based on the most up-to-date government information.

Administrators traditionally rely on the current *Junior-Senior High School Handbook* for guidance regarding department regulations. This handbook was being phased out between 1988 and 1989 and being replaced with two new handbooks, entitled *Guide to Education: Junior High School Handbook, 1989-90* and *Guide to Education: Senior High School Handbook, 1989-90.* In the interim, the government communicated with school boards, and school officials received second-hand information about the changes, which added to the uncertainty.

The Category "C" options were the first area to be adjusted. Initially, more courses became eligible for inclusion as Category "C" options in response to inquiries from teachers and administrators. Physical Education 20 and 30, and Law 20 and 30 were among the subjects added to the eligibility list. *The 1989-90 Guide to Education: Senior High School Handbook* (1989c) indicated that courses within the languages, fine arts, and practical arts, that were planned in sequences of two or more courses and that had defined content, offered the opportunity to expand personal interests, abilities or career aspirations, and broadened students' learning beyond the core Category "A" and Category "B" subjects, were eligible for Category "C" subjects. The 1990-91 Handbook removed the course sequence requirement (Alberta Education, 1990a) enabling students to take any courses that broaden the students' learning beyond the required core courses. These Category "C" changes have been made retroactive to the requirements of students who entered grade 10 in 1988-89. Initially, these changes generated a great deal of confusion for students, administrators, and teachers, but now that virtually all complementary courses qualify as Category "C" options and there is no sequence requirement, the confusion should be reduced.

The second area of significant change relates to the science program. Some Albertans were concerned with the structure of the science program as it was proposed in the new graduation requirements. This issue is presented in detail in Chapter 7; however, a brief summary of the concern is included here as an indication of the complexity surrounding the change. On January 26, 1990, the Minister of Education, Jim Dinning, following a lengthy consulting process with parents, teachers, trustees, and professional and business groups, and his advisory committee on high school science programs, announced that the future for science education in Alberta is "more and better science for all students" (Alberta Education, 1990e). The Minister confirmed his resolve to proceed with the general science program (Science 10, 20, and 30) and to require that Science 10 be the prerequisite for all 20-level science courses. The credit value of Biology 20, Chemistry 20, and Physics 20 would be increased to five for each course, and the content of all of the science courses would be revised. Involvement of teachers, post-secondary institutions, and professional groups in program development and teacher inservice guaranteed the stakeholder groups that the government would continue to be attentive to their concerns. To allow time for development of the new science programs, the implementation of the Science 10 course was delayed until September 1992, the 20-level courses until September 1993, and the 30-level courses until September 1994. Stakeholder groups reacted favorably to the restructured science program.

Discussion regarding clarity and complexity of the change. Contrary to the teachings of Fullan (1982) that implementation makes further policy and it does not simply put a predefined policy into practice, Alberta Education believed that the secondary education policy established the directions for the new graduation requirements and used its the legal authority to develop a rational plan clearly indicating a specific process for the implementation of the government's policy. The problem of translating the policy into practice was really a set of interconnected problems without readily available solutions. Mitroff (1983) refers to them as "complex, messy, real-world problems" (p. 8). When deeply rooted, fundamentally differing beliefs exist, Mitroff and Mason suggest that

> a dialectical treatment of conflicts is called for because such conflicts demand a method which is capable of recognizing first of all how deep they lie. Secondly, a method is demanded which is capable of appreciating that the various sides of the conflict fundamentally depend on one another for their very existence; they depend, in other words, on one another not "in spite of" their opposition but precisely "because of" it. Finally, a method is demanded which is capable of producing a synthesis (if one is possible) which is based on a full recognition and appreciation of the conflicts, not by ignoring or trivializing them. (1981, p. vii)

They suggest two related approaches for dealing with such problems: first, that all stakeholders must be involved in the problem structuring process, and second, that a multidisciplinary approach and dialectical argumentation must be used to consider the various aspects and interpretations of the problem. MacKay (1990) suggests that researchers "could look for evidence regarding the presence or absence of wide participation by stakeholders and use of a dialectical approach to argumentation" (p. 2) to determine whether the approaches used, in this case by Alberta Education, were relevant to the "wicked problem" it faced (p. 2).

In the development of the secondary education policy, two distinct phases were apparent. One phase encouraged widespread participation from various stakeholder groups; the next phase consolidated input, finalized the policy, and submitted it to the government for approval. The first phase could be described as a political bargaining process whereby stakeholders believed they were negotiating with the department and government to promote their interests. The second phase was characterized by a top-down or elitist procedure, whereby the government, acting as policy maker, formulated the policy (Bosetti, 1986). It appeared that Alberta Education believed that Mason and Mitroff's first approach, namely, involvement of all of the stakeholders, was achieved in developing the secondary education policy. It is clear that their second recommendation, the use of a multidisciplinary approach and dialectical argumentation, was not followed.

The development of the new graduation requirements began with an internal Alberta Education study and was followed by the release of a proposed set of graduation requirements. In the next phase, Alberta Education's intentions were two-fold: first, they gave Albertans an opportunity to offer their comments and feedback regarding the proposed graduation requirements, and second, Alberta Education used the opportunity as a means of dispersing information to stakeholders to ensure that they increased their knowledge and understanding of the proposed changes to facilitate implementation. During the three-and-a-half-month period provided for formal feedback, stakeholders repeatedly questioned the proposed changes. Most of the stakeholder input did not result in changes to the proposed graduation requirements, and early in the new year (1988), Alberta Education brought closure to the discussion by adopting a set of requirements that closely resembled those outlined in *Proposed Directions* (Alberta Education, 1987a).

It is clear in examining the process followed for the development of the new graduation requirements, that neither of the approaches recommended by Mason and Mitroff (1981) were used to deal with the "wicked problem" of developing new graduation requirements. Stakeholders were not involved in the problem structuring phase, nor was a multidisciplinary strategy or dialectical argumentation used to deal with the various aspects and interpretations of the problem. MacKay (1990) suggests that "a policy process which fails to use these two related approaches is fundamentally flawed" (p. 2). It is debatable whether Alberta Education provided the frequent opportunities essential for free expression of opinions. First, the proposed requirements were developed internally without formal stakeholder input; and second, stakeholder reactions were invited only after the *Proposed Directions* paper was released. It could be argued that since the graduation requirements were a policy initiative of the secondary education policy, and since stakeholder input to the development of that policy was extensive, the opportunity for expression of opinion was met. On the other hand, the policy did not, as Alberta Education officials pointed out on several occasions, define the details of the graduation requirements. Therefore, stakeholders did not have the opportunity to engage in dialectical debate regarding the details of the graduation requirements, thus negating the argument.

In the case of a flawed policy process, MacKay (1990) proposes three questions to ascertain the cause:

> 1. Were the policies inevitable given the personal preferences of the top persons in the hierarchy?
> 2. Was the decision-making bureaucratic rather than rational?
> 3. Was a "gloss of rationality" applied to the surface of the policy process as a particular kind of reconstructed reality or bureaucratic fiction after the fact? (p. 3)

A comparison of the proposed graduation requirements and the final graduation requirements reveals only one actual change, raising the question of whether the opinions of stakeholders held much weight vis-à-vis the opinions of senior people in the Alberta Education and government bureaucracies in the formulation of the *Requirements and Update.*

Evidence relating to MacKay's second question, the decision-making process, indicates that it was essentially bureaucratic. The absence of meaningful participation by stakeholder groups, combined with Alberta Education's apparent belief that the secondary education policy would determine the new graduation requirements, suggests that the real decision-making was made internally at Alberta Education. Furthermore, Alberta Education referred to the policy as a government policy and, therefore, the will of the people. However, once stakeholders became involved in the policy process, the bureaucrats found themselves in the difficult position of trying to rationalize their mandate while answering the concerns of these stakeholders. Alberta Education attempted to apply the "gloss of rationality" (MacKay, 1990, p. 3) to developing the new graduation process because the change was perceived in an oversimplified way. There was more to changing the graduation requirements than Alberta Education assumed: it was a complex, ill-structured problem.

Although the new graduation requirements were clearly outlined together with an implementation schedule, the subsequent revisions made it increasingly difficult for implementers to act with confidence. The concept of the Category "C" options, for example, was confusing. Which courses were eligible, and which were not? A program planning booklet omission about the eligibility of certain courses (Alberta Education, 1988a; Alberta Education, 1988b), together with the expansion of the qualifying courses, compounded the confusion that resulted from ongoing revisions to the list of Category "C" courses. Changes to the science program generated additional uncertainty. Added to the department's internal difficulties with program development was dissention regarding the overall structure and content of the science program. The Minister of Education responded by ordering a re-examination of the science program that added to the skepticism felt by implementers: it was not entirely clear what they were expected to do, when they were expected to do it, or why they were expected to do it.

The implementation of a complex change has the potential to achieve greater benefits if it is done in a way that maximizes clarity by defining specific components and implementing them incrementally (Fullan 1982). The graduation requirements outlined in *Requirements and Update* attempted to implement specific program requirements incrementally over a three-year phase-in period. Notwithstanding the fact that some stakeholder groups did not accept the new graduation requirements, there is evidence that Alberta Education's failure to address some technical details of the phase-in schedule led to revisions, which in turn added confusion and complicated the schedule. Concerned stakeholders negotiated several changes with Alberta Education, leaving implementers uncertain as to what, when, and how they were to act.

Quality and Practicality of the Program

The availability of adequately developed and good quality practical materials is essential to the successful implementation of any change (Fullan, 1982). Conversely, the lack of such materials may constitute a major barrier to change.

In the case of the new graduation requirements, the program review determined that several programs essential to the implementation of the new requirements needed revision and new resources, while others needed major redevelopment. The Director of the Curriculum Design Branch indicated that new programs were developed in accordance with the general process and criteria outlined in the Alberta Education publication, *Who Decides What Students Should Learn in School and How?* (1989d). "We reviewed the current curriculum relative to the policy directions outlined, identified areas that needed to be changed, and sent draft documents to Albertans for their consideration as we prepared new programs" (Symyrozum, 1990, p. 2). Programs were phased in one year at a time to provide teachers with more opportunities to gradually become familiar with the curricular changes.

According to Fullan, (1982) "inadequate quality and even the simple unavailability of materials can result when adoption decisions are made on grounds of political necessity or perceived need without time for development" (p. 59). It is likely that both situations were true of particular problems that developed in implementing new and revised programs for the new graduation requirements. In some subjects, social studies and science for example, the availability of resources and the development of curricula were problematic. Two programs seemed to be adequately developed with high quality resource materials: CALM and mathematics. One department head summed up the critical expectations of teachers for the implementation of new courses this way:

> They expect a lot of what might be called support. They want a good textbook, they want a book of activities and additional exercises and worksheets to go along with it, and they want something in terms of evaluation. In my mind, if you want a course to be successfully implemented, all of these materials should be produced beforehand, up front, and be ready for the first day of the course.

Fullan (1982) concurs that "teachers and others must experience some sense of meaning and practicality relatively early in the process of attempting change" (p. 62) for the implementation to gather momentum. Provision of useful information packages assists individuals to develop meaning in relationship to the changes.

The science program. There is no question that the science program has been one of the most controversial aspects of program development as related to the implementation of the secondary education policy. The key change in the science program was the introduction of an academic stream of general science. The program, known as Science 10, 20, and 30, was designed "to meet the needs of students who may not prefer or need a specialized science for entrance into some post-secondary faculties" (Alberta Education, 1987a, p. 12). A second change required all General Diploma students to earn additional credits in science to gain a more comprehensive understanding of science. The Science 14-24 courses were designed to achieve this goal. Both of the new science programs, as well as the traditional specialized science programs, experienced problems relating to structure, content, or resources because there was a lack of consensus regarding the need, relevance, and direction of the proposed changes. Some of the difficulties in the development of the science program have been alluded to earlier in this chapter, and others are dealt with in more detail in Chapter 7.

According to Fullan (1982), inadequate quality and even the simple unavailability of materials can result when adoption decisions are made on grounds of political necessity or perceived need without time for development. This appears to have been the situation regarding the materials for implementing the new science program. Appropriate textbooks and support resources required extensive revision and were not available to meet the original implementation dates. The Minister of Education, Jim Dinning, in a letter to School Board Chairmen dated April 5, 1989, announced a one-year delay in the validation and implementation process. This change had a ripple effect in that courses that were part of the new graduation requirements were not available; and consequently, certain aspects of the new graduation requirements were also delayed by one year. Specifically, the requirement for 15 science credits for an Advanced Diploma would come into effect for students entering high school in September of 1991. While Alberta Education was sensitive to monitoring and adjusting the requirements in response to emergent situations, the successive changes resulted in ongoing adjustments to the implementation schedule.

The social studies program. The new social studies program formalized a two-stream structure and reintroduced the requirement for credit in grade 12 social studies. In addition to the academic stream of Social Studies 10-20-30, a new stream was introduced to accommodate students whose needs were not being met through the existing stream. Although the program goals for each stream are identical, the 13-23-33 sequence "will be differentiated on the basis of instructional methodology, evaluation techniques, learning resources, and complexity of content" (Alberta Education, 1987a, p. 11). Teachers at Meadowview High School supported the dual-stream structure for social studies, but it received mixed support at the district level. However, both the social studies department head at the high school in the study and the district consultant expressed concern regarding the mismatch between curriculum and resources. While there are many resources, no one book covers all of the content for a particular grade level. The reality of the social studies situation was pointed out by the principal of the school:

> social studies hasn't ever not needed a new textbook, or a new something. Social studies has been changed more than any area and so their concerns are not really anything unusual.

The social studies consultant called the change in the social studies program dramatic. Whereas the previous program was somewhat prescriptive in that support materials were well-defined components of the teaching resources, the new program spells out the knowledge base students are expected to achieve and gives teachers options and suggestions for achieving them.

Teachers feel that an extensive amount of change is required to implement the new program, and they believe they are expected to do too much of it on their own. Teacher inservicing has been left to local jurisdictions. The school district has developed a series of inservice programs designed to familiarize teachers with the new program, but attendance is at the option of individual teachers. Teachers are also concerned about the diploma examination scheduled for the Social Studies 33 course. To date, neither the examination nor an explanation for its absence has been offered. Collectively, these issues are sources of annoyance to the teachers and are acting as barriers to the full implementation of the new social studies program

The Career and Life Management course (CALM). CALM is a new core course, and students are required to earn a minimum of three credits in the course for either the Advanced or General High School Diploma. The program was mandated by the secondary education policy statement and was designed to enable students to develop skills and knowledge in five broad topic areas: careers, personal finance, life management, preventative alcohol and drug education, and other relevant societal issues (Bosetti, 1990). Alberta Education developed curriculum, manuals, a leader's guide, and inservice videotapes as well as authorizing textual support materials for the new course.

Prior to mandatory implementation, the CALM course was piloted at Meadowview High School. During that time, students from all three grade levels were allowed to obtain access to the program. The principal commented that "not all grade 10's, but a significant number of grade 10's were really too immature to examine some of the issues in CALM and so we confined it to the grade 11 students." He went on to observe that "the delivery system for CALM is working really well, the teachers love teaching the subject, and the kids feel that it is one of the most significant things they are taking in school."

Generally, the quality of the program, the inservice activities, and the materials for CALM supported the implementation of the program. The materials and the resources were considered to be more than adequate; in fact, their abundance made becoming familiar with them and making choices a major time-consuming task for teachers. The district's consultant for CALM felt that the textbook resource was "lacking," and the CALM teachers at Meadowview High School confirmed that they generally did not use it. A second concern about the program was that there was too much content for a three-credit course. Teachers indicated that they found it difficult to deal with all the topics in sufficient depth, because there simply was not enough time. Teachers and administrators participated in the many Alberta Education and school district inservice opportunities, and two teachers were enrolled in the University of Alberta certificate program on CALM. The overall success of the program can be summarized in the principal's concluding remarks: "Nothing but positives about that one." This perception was echoed in discussions with the consultant, the department head, and teachers responsible for the program at Meadowview High School.

The mathematics program. The new graduation requirements, as mandated by the secondary education policy, increased the number of credits a student is required to earn in order to qualify for a high school diploma. The Mathematics 14-24 sequence was designed to focus on fundamental mathematics skills and their application in consumer, technical, and service contexts. The Mathematics 10-20-30 and 13-23-33 course content increased the emphasis on problem-solving skills, the use of technology to enhance understanding of mathematical concepts and relationships, and practical applications (Alberta Education, 1987a).

Changes to the curriculum in mathematics were perceived to be a philosophical shift towards improving students' "understanding of why things work the way they do and problem-solving." The district math consultant believed that articulation between the grade 9 and 10 programs and between Mathematics 10 and 20 had been improved by "shuffling the content" around. Three publishing companies developed textbooks according to guidelines established by Alberta Education, and all were given basic resource status. Teachers at Meadowview High School were encouraged to review each textbook and select the one they wished to use in their classes. The principal of Meadowview High School described the changes associated with the mathematics program:

> I think those folks have probably adapted most comfortably to the changes and most cooperatively, and probably most successfully. It's such a neat, tidy area: it's my old area. And of course, it's very easy to just concentrate on the diploma exams. I know there that they teach for the exam.

The department head's comments about the mathematics changes confirmed that the transition to the new curriculum "ran quite smoothly" and credits the good networking relationship between the schools, central office, and Alberta Education math consultants for the success.

English language arts. Essentially the new graduation requirements for English courses were unchanged. All students were required to earn 15 credits in English either through the academic stream of English 10-20-30 or the alternative stream of English 13-23-33. Curricular changes focused on the introduction of technological processes such as word processing and data management to the program of studies.

Implementing the curricular changes in the English program presented a classical problem of implementation complexity as described by Fullan (1982). The principal of Meadowview High School faced a major problem with respect to facilities and equipment, specifically computer technology. Computer labs simply were not available. Additionally, the majority of teachers involved in delivering the English program did not have the skills, and more importantly, the belief systems that would enable them to implement this program requirement. Without substantial financial assistance for equipment acquisition and teacher inservicing, he did not see how this aspect of the English curricula could be implemented. Given the difficulty of assembling the required resources and the extent to which individuals were being required to change, the practicality of implementing the new graduation requirements for English posed a problem for Meadowview High School.

Physical education. The new graduation requirements increased the number of credits students were required to earn in Physical Education from two to three for either diploma. The curriculum was revised to emphasize personal fitness and effective use of leisure time.

Implementing this change was not an issue at Meadowview High School. The principal explained that the school had always offered the physical education program for a minimum of three credits related to the logistics of scheduling, and he believed this to be the situation in most other large high schools.

Discussion of findings regarding quality and practicality of program. The success of implementing new programs centers on what Fullan labels "the dilemma of explicitness" (1982, p. 62). On the one hand, highly explicit innovations may not be appropriate to the implementers and their environment; on the other hand, unstructured changes with unspecified expectations result in confusion. The key to determining the optimum degree of explicitness lies in being able to provide implementers with some meaningful and practical experiences early in the change process. In some subject areas, such as CALM and mathematics, Alberta Education was able to achieve this balance, but in other subject areas further effort is required.

## Chapter Summary and Discussion of Results

The new policy for secondary education in Alberta mandated the introduction of substantial changes to the high school graduation requirements. The actions of both the Government of Alberta and Alberta Education demonstrated a strong commitment to changing secondary education by changing the high school graduation requirements. Fullan (1982) cautions that strong commitment has the potential to become a barrier to change if the leadership is committed to its particular version of the change, and this appears to have been the case in the development of the new graduation requirements. The data collected for this study indicate that

Alberta Education made two critical assumptions that affected implementation of the new graduation requirements. First, Alberta Education assumed that the policy problem was well-structured in nature and could be implemented by presenting implementers with a detailed action plan. Alberta Education's second assumption was that policy could be successfully implemented using a classical managerial perspective of the policy process. Both of these assumptions led the decision makers to use a logical rational process to implement the new graduation requirements.

Theorists such as Dunn (1981) and Fullan (1982) suggest that the policy process is not a linear process based on cause and effect, but rather is a complex cyclical process that begins by structuring the problem. Fullan states that "implementation makes further policy: it does not simply put predefined policy into practice" (p. 79). Dunn illustrates the process of policy analysis using a circular representation that shows the interdependences of information and methods "linked in a dynamic process of change that involves *policy-informational transformations*" (p. 48, his italics). By assuming that the policy implementation process was a linear, policy-regulation type of procedure, Alberta Education also assumed that defining new graduation requirements as a well-structured problem implied that the alternatives were limited, consensus was more or less assured, the outcomes were relatively certain, and decisions could be made within the department. Alberta Education believed that the graduation requirements could be altered through logical, rational planning. However, schools are social organizations that cannot be transformed by logical argument. Fullan suggests that innovators must be open to the realities of others "because the ideas of others will lead to alterations for the better in the direction of change, and sometimes because the others' realities will expose the problems of implementation which must be addressed" (1982, p. 82).

Translating a policy document filled with complex values and differing meanings for various stakeholders into policy actions is a perennial problem for policy analysts. This certainly was the situation for Alberta Education as it attempted to redefine the graduation requirements using the ideals of the secondary education policy. The problem was one for which there was no simple solution or solutions. Alberta Education understood policy implementation from the classical/managerial implementation perspective and, as such, believed that implementation was the enactment of a set of rational systematic plans that evolved from the policy. The error in structuring the policy problem led to inappropriate decisions and actions on the part of Alberta Education that were challenged by various stakeholders throughout the province.

Defining the new graduation requirements was a policy problem of the ill-structured type. The conflicting values of the various stakeholders, together with the possibility of unlimited alternatives, suggested that a widespread consultation process should have been employed to structure the problem and propose the changes. Failure to clearly conceptualize the problem, combined with the fact that it was ill-structured in nature, was borne out in the many adjustments that were made to the requirements since they were originally announced in 1988.

The data provide evidence that Alberta Education initiated action to seek the input of Albertans through a consultative process. The meaning Alberta Education attached to the term *consultative process* is not the conventional meaning of the concept. Alberta Education stated that use of the consultative process was designed to assist stakeholders to understand how the proposed changes differed from current practice, with the idea that it would facilitate implementation. Potential implementers and stakeholders, on the other hand, believed that the consultative process would provide them with opportunities to give meaningful input to the policy development.

Further evidence for the differing perceptions about the consultative process could be built around two issues: the nature of the participation of stakeholders in the consultative process, and a comparison of the proposed requirements and the final requirements. First, participation was solicited from educator-stakeholders who were given a limited amount of time to submit written responses to the proposed changes to the *Proposed Directions for Senior High School Programs and Graduation Requirements* (June 1987a). During the fall of 1987, Alberta Education made presentations to interested and concerned educators and parents across the province; these groups raised many issues regarding the new requirements, and particularly questioned Alberta Education's vision of a balanced, comprehensive education system. Second, a comparison of the proposed changes and the final requirements indicate that only one change was made in the 1988 version of the graduation requirements as the result of input from stakeholder groups. It could be surmised that Alberta Education had more or less decided what the new graduation requirements would be prior to its *consultative process,* which could explain why there was little change in the new graduation requirements from the time they were proposed to the time when they were finalized. Furthermore, the concerns raised by stakeholder groups failed to convince Alberta Education of the need to make adjustments to the requirements.

The findings of this study support Bosetti's findings regarding implementation assumptions made by Alberta Education, namely, that "(a) the top-down marketing strategy would be effective, (b) understanding of the change would lead to acceptance, (c) little consultation with teachers and other key local actors would be needed, (d) implementation would follow adoption as effect follows cause, and (e) there would be capacity as well as willingness to comply at the local level" (MacKay, 1990, p. 4).

Alberta Education's actions in implementing the new graduation requirements could be categorized as falling within the classical/managerial model of policy implementation. Alberta Education developed regulations that school jurisdictions were expected to adopt and to implement. The systematic unfolding of Alberta Education's rational implementation plan was assumed to be directly related to the secondary education policy. Alberta Education believed that once the plans were finalized and circulated, schools were obliged to implement them. The stakeholder groups, on the other hand, partially conditioned by the previous consultative process in the development of the *Secondary Education in Alberta* policy, understood the policy implementation process from the political/interaction perspective and continued to negotiate to protect and promote their particular values. The end result was that the government was forced to re-examine aspects of the new graduation requirements and adapt. An Assistant Deputy Minister of Education indicated "the evidence is that it is changing, adapting, and adjusting. Where there is any evidence of a problem, another change will be made next week."

The original requirements mandated in the February 1988 *Requirements and Update* have been revised several times as a result of the intervention of many stakeholders. Although Alberta Education approached the task of structuring the new graduation requirements using a top-down implementation strategy, Alberta Education also holds a powerful sanction that forces schools to implement the policy initiative: its ability to withhold high school diplomas unless students have completed the full requirements. In structuring the new graduation requirements, Alberta Education interpreted the change in an oversimplified way: in reality there was more to the change than was initially realized.

# CHAPTER 5
# IMPLEMENTATION FROM THE SCHOOL PERSPECTIVE

## Introduction

Goodlad (1975) characterizes the school as the unit of change. The actual change is put into practice at this level and individuals affected by the change must be resocialized to respond and adapt if the innovation is to be implemented effectively. Fullan (1982) suggests that three factors have primary influence on school implementation: the role of the principal, peer relationships among teachers, and teacher characteristics. Although students and their parents are not explicitly identified in Fullan's *Factors Affecting Implementation*, he acknowledges that both groups are factors in the change process. Fullan (1982) and Rutherford and Murphy (1985) point out that, while students are generally seen as the potential beneficiaries of change, they are also participants in this people-related phenomenon. Similarly, several researchers have concluded that parental involvement and support for the innovation is a common characteristic of successful programs (Fantini, 1980; McLaughlin, 1977; Wellisch et al, 1976). Students and parents were, therefore, included in this study as relevant sources of information regarding the new graduation requirements. Likewise, the theoretical framework for content analysis of the interview data was expanded to include the categories of students and parents as school-level factors relevant to the change process.

This chapter examines the relationships between the new graduation requirements and school-level factors; namely, the role of the principal with respect to leadership and management of the implementation; the responses of department heads; the concerns of teachers vis-à-vis the innovation; and the perceptions of parents and students regarding the new requirements. The chapter begins with a description of the school, which for the purposes of this study is referred to as Meadowview Composite High School, and continues with the presentation of data from the perspectives of school administrators, faculty, parents, and students. Each section is followed by a discussion of the findings relevant to the stakeholder group. The chapter concludes with a summary of the findings as they relate to the implementation of the new graduation requirements at Meadowview High School.

### Data Collection within the School

Data for this chapter were collected through semi-structured interviews and questionnaires during the months of December 1989, and January and February 1990. The principal, assistant principal responsible for academic subjects and programming, and five department heads participated in semi-structured interviews. Copies of the covering letter and interview questions are found in Appendix A. All certificated people on staff at the school were asked to complete a three-part questionnaire that included items relating to their personal concerns and understanding of the new graduation requirements and measured their Stages of Concern regarding the change. A copy of the covering letter to teachers and the teacher questionnaire are found in Appendix B. Teachers were also invited to contact the researcher to further discuss their beliefs and opinions. Five teachers, plus the three CALM teachers whose students were involved in the study, shared their perceptions of the new graduation requirements with the researcher during informal discussions.

Each student enrolled in CALM 20 during the first semester of the 1989-90 school year completed a student form of the questionnaire. In addition, all students enrolled in CALM were asked to invite one of their parents or a guardian to complete the parent/guardian form of the questionnaire. A copy of the student questionnaire is found in Appendix C and copies of the parent questionnaire and covering letters are found in Appendix D.

Table 14 provides information regarding the sample size and rates of return of the questionnaires. The rates of return on the questionnaires are within the range of acceptable standards.

### The Alberta Teachers' Association Survey

Almost concurrently with this research study, the Alberta Teachers' Association conducted a survey on awareness of and concerns about the new High School Diploma Programs in Alberta (Alberta Teachers' Association, December, 1989a). The results of that survey were compared, as appropriate, to the data collected in this study. The ATA sample was drawn from throughout the province and included 151 grade 10 and 143 grade 11 students who completed a written questionnaire; 120 teachers of high school courses; and about 800 members of the general public, including parents who were interviewed by telephone. The study was conducted during the fall of 1989 by an independent research firm employed by the Alberta Teachers' Association.

Table 14

Questionnaire Sample Demographics

| Respondents | N | Return Rate (%) |
|---|---|---|
| Certificated Staff | 69 | 81 |
| Students | 98 | 100 |
| Parents | 79 | 81 |

## The School

Meadowview Composite High School was built in the 1960s to serve the largely blue-collar neighborhood of a newly annexed section of the city. Over the years, two additions were built. The school facilities now provide a wide variety of learning experiences to satisfy the diverse needs of students. The present facilities include two libraries, three gymnasia, a mathematics laboratory, a cultural centre, and three computer laboratories. A school store, a full-service cafeteria, and a fast food shop provide for specific student needs. A major recreation complex including an arena and swimming pool, a stadium with track, playing fields, and tennis courts is located adjacent to the school and is fully accessible for school programming. The outward growth of the city brought a substantial increase in residential construction and an increase in the school's enrollment to the 2500 level in the 1970s. At that time, school facilities were at maximum utilization. During the 1980s, enrollment declined gradually; and, in the 1989-90 school year, slightly over 1700 students were enrolled. The school has the advantage of a substantial space surplus.

Meadowview Composite High School offers a comprehensive complement of full-year and semestered programs designed to meet a wide variety of student needs and interests. Programs range from the Academic Challenge program for academically capable students to the Academic Opportunity program for students with demonstrated learning disabilities. Specialized courses in industrial education, business education, fine arts, home economics, physical education, technology, English as a Second Language, and modern languages are among the complementary electives listed in the school's program planning guide (Meadowview Composite High School, 1989). The school takes pride in its strong student activity program and excellent school spirit. A very successful interschool and intramural athletic program, an active Students' Union, and a wide range of special-interest clubs complement the formal curricular offerings.

The school theme, *M. V. Pride*, encourages students, staff, and parents to become more interested and involved in their school. During the 1989-90 school year, the theme was expanded to include the following mission statement in recognition of the increasingly competitive post-secondary scenario:

> Meadowview Composite High School is *SERIOUS ABOUT SUCCESS* for each individual student. The school is committed to provide opportunities for each student to grow in the areas of:
>
> *RESULTS* (commensurate with ability)
>
> *RESPONSIBILITY* (exemplary citizenship) in a positive environment which fosters
>
> *RECOGNITION* of good performance.
>
> The success of the school also depends upon close partnerships with the home and the community. (Meadowview Composite High School, 1989)

The school theme and mission statement are communicated extensively throughout the school in various displays, on program and resource materials, and on official school documents.

## The Principal

As Fullan (1982) so succinctly stated, "Change is only one small part of the forces competing for the principal's attention and usually not the most compelling one" (p. 130). Furthermore, he suggests that the principal is in the middle of a human triangle between the teachers, external ideas, and people. The principal's day is a steady stream of one-to-15-minute interactions either through scheduled or ad hoc meetings and telephone conversations. Conflict and dilemma are pervasive. On an average day, Martin and Willower (1981) found that secondary school principals performed an average of 149 tasks with constant interruptions--over 50% of their observed activities were interrupted. There is great pressure on the principal to maintain stability by running an orderly school and to avoid trouble by preventing small problems from escalating into big ones. Fullan (1982) notes that an administration's preoccupation with maintaining organizational stability "is not always or even usually a bad thing" because it contributes to a stable working environment and can protect the school from "ill-conceived or unrealistic change projects" (p. 134).

Berman and McLaughlin (1977) found that, when the principal actively supported the change, projects were most likely to do well. They cite the principal's involvement in workshop sessions with teachers as one of the best indicators of active participation. However, Fullan (1982) also recognizes the great demands on a principal's time and acknowledges the impossibility of being an expert in every subject area. The critical time for principals to be involved with change is in the initial stage of the implementation. The principal's actions at this stage drastically affect subsequent events (Reinhardt, 1980). Reinhardt indicated that, thereafter, the principals of large schools that had successfully implemented changes did not remain involved on a daily basis, but rather showed interest and were available to solve emerging problems. The principal's primary dilemma in coping with change centers on a lack of time.

This researcher's experiences involving the principal of Meadowview High School correlated positively with Fullan's description of the principal's role. His daily routine included talking to students, praising their accomplishments, discussing concerns with teachers, checking with his secretary, meeting with the assistant principals, cruising the halls, visiting classrooms, answering the phone, meeting with central office personnel, and so on. The principal was an outgoing, friendly, respected, and organized person, a decisive administrative leader who seemed to be knowledgeable about what was happening in his school. He had completed a Master of Education and one year's study towards a doctorate in secondary education. This was his second year at Meadowview High School and his third high school principalship over the past 11 years.

The principal indicated that he had followed the development of *Secondary Education in Alberta* (Government of Alberta, 1985), the policy statement from which the new graduation policy initiative developed. He became very acquainted with the new diploma requirements in his previous school when the Alberta Teachers' Association local organized a meeting with Alberta Education regarding the *Proposed Directions for Senior High School Programs and Graduation Requirements* (Alberta Education, 1987a) at the site of his former high school. The resulting confrontation received considerable media attention. In the course of discussions with the researcher, the principal of Meadowview High School enunciated a clear vision of what he believed to be the focus of a well-rounded high school education and how the high school graduation requirements fit into his belief of what schooling was all about.

Meadowview High School is following the Alberta Education regulations with respect to organizing program delivery to ensure that students have access to the courses required to achieve either the General Diploma or the Advanced Diploma. One interviewee was quite blunt in expressing the reason: "We have to. It is not a matter of choice." He went on to say that it would be a great embarrassment if students didn't get their diplomas because of something the school chose not to do. In response to an inquiry about the implementation of the new graduation requirements at Meadowview High, the principal replied,

> Oh sure, yes. We are following Alberta Education's mandate for the new graduation requirements. Over time, I have learned to live with almost anything by way of graduation requirements.

There was little doubt that he felt that he had little choice but to accept the new graduation requirements and implement them at Meadowview High.

The principal believed that his personal perspective of the new requirements was shared, in the main, by the staff, students, and parents of the school. Some components were favorably received; others were not. The principal commented on the raising of the passing grade from 40% to 50%:

> I guess the major strength [of the new graduation requirements] is the 50%. Like you are either passing or you're not passing and you can avoid the shades of gray about 40%. What does it really mean if you have acquired 40%? I believe it is ever so much more understandable to the public.

A second area of the new requirements receiving the principal's commendation relates to the CALM course. He indicated that it was a very successful course in that it dealt with real life issues and was well liked by students and teachers. A third strength of the new graduation requirements, the principal cited, related to the blended mark for diploma examinations. He believed that it represented a decent balance that overcame his objections to the previous procedures: one-shot departmental examinations or the total licence of teachers to grant the final mark.

The principal expressed one major area of concern with the new graduation requirements. While he believed the emphasis on academics to be desirable, he also expressed concern about the degree of academic emphasis established for the Advanced Diploma program. The principal indicated that

> personally, I would rather see maintenance of a bit of breadth and let people, say, enjoy both the heart and soul of an education. I believe that we are producing narrower graduates. They may be better graduates, but only in the narrow sense. I'm not convinced that they will be better citizens particularly.

He was especially concerned about the reduced opportunity for students to benefit from and enjoy practical experience and personal-interest courses because he believed that "there's more to life than academics." It was his perception that the requirements for the General Diploma program, on the other hand, added a degree of academic rigor without compromising the opportunity for students to explore personal interests. A second area of the principal's concern related to the emphasis on diploma examinations. He indicated that high schools are teaching for the examinations:

> it's called education to get a higher number result on a diploma exam. So that means that we will be producing a crop of people who will be much more proficient in terms of regurgitating the kind of information that we have given them prior to an exam.

While he did not attribute all of the focus on diploma examinations to the new graduation requirements, he believed that the increased rigor of the requirements was contributing to this effect. The principal's overall reaction to the new graduation requirements was positive, although he had major concerns regarding the academic emphasis, especially as they related to the Advanced Diploma requirements.

### School-Based Adaptations to the New Graduation Requirements

The new graduation requirements were introduced by Alberta Education as regulations governing the awarding of high school diplomas. High schools literally had no choice but to comply with the regulations. In doing so, high schools were forced to integrate new programs and program delivery patterns in their schools. The next section presents information about how the introduction of this new constant affected other variables in the operation of Meadowview High School and how the principal dealt with them. The principal's concern for students and their success pervaded many of his comments and indicated his struggle to ensure that students enjoyed success in high school while earning their diplomas. His actions ranged from promoting the four-year high school program option, to tightening up attendance requirements, to reorganizing the responsibilities of school-based administrators, to staffing for individual student assistance. Although the new graduation requirements were mandatory, the principal indicated that he didn't believe he was doing anything differently, or that he stood for anything different than he had ever stood for. He continued to work enthusiastically with each individual under his care in an effort to ensure each student's success.

The evolution of three-and-a-half and four-year programs. Alberta Education's format for the implementation of the new graduation requirements suggests that programs are to be completed in three years of high school, although there is nothing in the regulations mandating completion in this time period. The principal believed that for some students, who were both capable and motivated, achieving their diplomas in three years would not be a difficulty. However, not all students are capable and highly motivated; and the principal, recognizing this reality, encouraged students to be as realistic as possible about their ability and interests within both the school and community settings and to plan to complete their high school diplomas over a three-and-a-half or four-year period. Through this alternative, students set themselves up for the positive experience of success instead of the possibility of failure and its associated stress. By planning for the extra time, students could be encouraged to select special-interest courses that seem to add to their enjoyment of school as well as meet the entrance standards of post-secondary institutions. The principal indicated that "more parents are starting to agree with this approach," and he believed that it was "something that will probably continue to evolve and could quite easily become a significant thing in the next little while."

The formal recognition of the four-year high school program as a planned objective for some students at Meadowview High School was a local adaptation that accommodates students' needs within the new graduation requirements and enables them to gain entrance to post-secondary institutions. He noted that the emerging trend for students to plan their high school programs over three-and-a-half or even four years could not be attributed entirely to the new graduation requirements and suggested that several other factors, including the revised university entrance requirements, competition for acceptance into post-secondary institutions, and student employment, were also having an impact on the length of time required to achieve high school diplomas. Nevertheless, the principal believed that this adaptation was the beginning of an evolution leading to four years becoming the norm for high school completion.

Administrative reorganization. When the graduation requirements came into being, the principal developed a new structure for delegating responsibility to the school's assistant principals. While all of the assistant principals remained responsible for interacting with students, their assignments with respect to subject areas had been modified. One assistant principal was designated as an academic assistant principal responsible for the four core courses of math, science, English, and social studies. The job description was clear and simple: "get me the best diploma results possible." A second assistant principal was given the responsibility for complementary courses. His job was to determine what courses the school should offer to meet the interests of students and then organize an effective program delivery strategy. This structure parallels the core/complementary structure of the new graduation requirements, and the principal felt it was an effective organizational structure. Because of the size of the school and the increasing expectations of the school's clientele, the third assistant principal at Meadowview High School was responsible for communications and public relations, and co-curricular/extracurricular activities.

Changes in the attendance policy. A strict attendance policy was instituted in the school because the principal believed that regular attendance would help kids to get better results overall. The tough attendance policy was designed to encourage students to choose to be in school and to focus on learning while there. He acknowledged that the school had many dropouts and that the attendance policy might even increase that rate; however, the principal did not believe that the diploma requirements had any impact on the dropout rate. The school's mission statement, *Serious about Success*, emphasized the belief that school is providing opportunities for each student to grow. Teachers' communication with the home has shifted from the negative "Why wasn't your child in school today?" to the very positive, "Susie did a great job on her last essay." The school emphasized positive communications with the home, and the principal believed that this encouraging approach would contribute to improved achievement that in turn will "get more kids to meet the graduation requirements." The principal stated, however, that the adoption of the new attendance policy was not related to the imposition of the new graduation requirements.

The principal's commitment to education seemed to be a more basic commitment to improving opportunities for student success than it was to merely implementing the new graduation requirements. Certainly, under his leadership the new graduation requirements were being incorporated into the program delivery structure of the school, but his primary focus was on "how can we do better for the kids." This particular adaptation would likely have been instituted regardless of whether there were new diploma requirements or not.

### Financial Resources

The principal allocated school-based resources according to the potential of the expenditure to benefit or enhance learning. He indicated that the new graduation requirements may not have been the only reason for the innovations, but that "there is a connection."

Individualized learning assistance. The Tower Learning Centre, affectionately called the TLC, was a major change that the principal felt had been forced on the school by the new graduation requirements. As an innovative project, the TLC received $40,000 for a full-time teacher equivalent to provide "one-on-one help" for students. Three teachers were assigned to the centre, and they were responsible for encouraging students to progress at their own pace, somewhat akin to advancement by competency, in the hope that they would challenge the diploma exams as they were able. The assistance, open to all students, was being used primarily by students who were already achieving at a high level, "the 80-90% variety, who are just coming in and finding out if they can get a little clue that's going to bump them to 95% from 90 or 85 from 80." Speaking of the potential for individualization, the principal observed, "I think we are actually going to move in that direction."

Plans were being made to introduce the concept of advancement by competency in Physical Education and Business Education programs at Meadowview High School for the coming year.

The Cap 30 policy. Additional funds were budgeted to accommodate the school district's "Cap 30" policy aimed at academic classes to ensure that no class had an enrollment of more than 30 students. The principal felt that there was a direct link with the new graduation requirements and the maximum class size policy in that smaller classes would provide for better teacher-student interaction and more student learning.

Other expenditures. Many of the new programs required new learning resources, but the principal indicated that the additional costs did not put undue strain on the school budget. Although providing new textbooks was costly, the principal did not believe the expense to be any more so than in the normal cycle. "It doesn't matter whatever causes you to buy new books, you still have to buy new books, and you live with it." He added that the large size of the school made it easier for Meadowview School to cope with the replacement of books, but he thought that smaller schools would have more difficulty. Other expenditures included buying computers for learning disabled students, the library, and library assistants. Once again, it was difficult to determine if these expenditures would have been made anyway or whether they can be attributed directly to the new graduation requirements. The principal thought that they would contribute to students' success in learning and at least indirectly affect the implementation of the secondary education policy.

Financial restrictions. The principal indicated that the school did not have the financial resources to acquire the type of technological equipment that would allow all students to learn word processing through their English language arts program. However, he did not believe this to be a major concern for two reasons: first, the English teachers had not expressed a strong desire to incorporate this component of the program into the curriculum and second, students could select business education options to obtain these skills. Additionally, students had the opportunity to use various computer facilities throughout the school to complete assignments and enhance their understanding of technology.

### Facilities

Because it is not operating at full enrollment capacity, Meadowview High School did not face any particular problems with respect to facilities for the new programs. One classroom was selected to be the CALM resource center, and it was expected that another room would have to be allocated in the coming year. As previously surplus classroom space was used, no serious difficulties were expected. Nor was the increased number of science courses, together with the increased requirement for laboratory experiences, a cause for concern. To quote the principal, "Our location has nothing but space."

### The Vocational Education Program

The principal expressed particular concern about one program at Meadowview High School: the vocational education program. In recent years, enrollment in these courses had declined steadily; and while the decline could not be attributed specifically to the new graduation requirements, the increased number of mandatory courses required for the new diplomas was expected to exacerbate the problem. The principal projected the need to review and revise these programs, and he felt that they may "recover, but in a very different format, much different than what we see today."

Overall, the principal is optimistic about the long-range outlook for the implementation of the new graduation requirements at Meadowview High School: "I don't see any major resistance or whatever evolving from here. I think they will continue to be accepted and we'll get better at delivering the services that are required."

### Discussion of the Principal's Perceptions

Through a variety of initiatives, the actions of the principal at Meadowview High School demonstrated support for the new graduation requirements, but it is clear that some aspects of the policy actions were of concern. While there was support for increased rigor in the requirements, there was a perception that the narrow academic focus of the requirements was not seen to be in the best interests of all students. The mandated program did not seem to be flexible enough to accommodate differences in students' ability, interests, and goals, and resulted in local adaptations that were developed to compensate for the anticipated shortcomings. Examples of unintended effects include provision of supplementary one-on-one teaching assistance, deliberate planning for a three-and-a-half or four-year high school program, reduction of class sizes, and tightening up of attendance requirements. Reorganization of administrators' responsibilities, bringing them into line with the core/complementary structure of the diploma requirements, proved to be an effective mechanism to organize for the change. These innovations, initiated by the principal, are examples of adaptive changes that were made at the school to implement the new graduation requirements.

Essentially, the Meadowview High School principal understood the implementation of the new graduation requirements from the perspective of the traditional top-down model of change. The principal understood his role as that of a policy implementer whose responsibility was to comply with the new graduation requirements as mandated by Alberta Education. Although, as the policy implementer, he accepted Alberta Education's legal authority as the policy maker to set the directions for graduation requirements and gave support to the implementation, there is evidence that his support was not passive. There are several examples of adaptations to organizational structures within the school that evolved in response to the top-down nature of the policy requirements. The principal was clear that his responsibility was to ensure that the learning needs of Meadowview students were being addressed, and the implementation of the new graduation requirements had to occur within that context. He endeavored to safeguard his students by implementing supplementary changes to offset what he believed would be the downside of the effects of the new graduation requirements.

Alberta Education's authority with respect to high school diplomas, stated simply, was the right to award high school diplomas to students who complied with specified requirements, and the right to withhold diplomas for students who failed to meet the requirements. Schools had little choice but to organize program delivery to ensure that students had the potential to complete the new graduation requirements. Failure to do so could prevent students from achieving diplomas, a situation no principal could afford to risk.

## Teachers

Data regarding factors relating to teachers vis-à-vis the changes were collected from several sources. The first source included data from the semi-structured interviews with administrators and department heads, the second source was a nine-page questionnaire that teachers voluntarily completed, and the third source was teachers themselves during informal discussions and unstructured interviews.

The principal made the teaching faculty aware of the study and encouraged their cooperation through an announcement in the school's regular Friday morning newsletter late in December 1989. At the end of the first school week in January, each teacher received a covering letter and the questionnaire through their school mailbox. A reminder letter was placed in teachers' mailboxes six days later to encourage completion and return of the questionnaires. The principal's secretary collected the completed questionnaires and, in addition, verbally reminded teachers to participate. Copies of these documents can be found in Appendix B.

The questionnaire was completed by 61 teachers, three counsellors, four administrators, and one teacher-librarian. Part I focused on demographic information, Part II collected information about teachers' understandings, beliefs, and opinions about the new graduation requirements, and Part III measured their Stages of Concern about the change. Fifty-five percent of the respondents were males; 45% were females. The majority (55%) of responding teachers had more than 19 years of teaching experience, 31% had 10 to 18 years of experience, and 14% had fewer than 10 years of teaching experience. Over half of the respondents (53%) had 16 or more years of high school teaching experience.

The teaching assignments of faculty members were such that an individual could teach in more than one subject area. The largest percentage of teachers were assigned to teach practical arts subjects (20%). Teachers of science represented the next largest grouping (19%), followed by teachers of math and social studies (15% each), and teachers of English (13%). Seven percent of the teachers were involved in teaching CALM, while fewer than 10% of teachers were assigned to teach other subject areas.

## Teachers' Perceptions of the New Graduation Requirements

In responding to a question regarding their awareness of the phasing in of a new set of graduation requirements for Alberta high school students, six teachers indicated they were unaware of the change and six teachers did not answer the question. Only 82.6% of the respondents answered affirmatively. Information proposing changes and later mandating the changes had been circulating in education circles for almost a year prior to the mandated implementation. Several explanations regarding teacher unawareness are plausible. The math department head offered this rationalization:

> I really don't think people are aware of the changes that are going on. You know, they are coming in so gradually that I don't think too many people really realize it. This year we had a change in the grade 10 level, it wasn't a drastic change. The only thing that was drastic was the fact that we had new textbooks so that meant that we had to do some more reading to get on to the idea of what the new textbook was about.

Furthermore, teachers new to the profession and teachers recently transferred into high school teaching positions may not have received information or may have ignored information about the change on the grounds that it was not especially relevant to them. Likewise, teachers whose area of subject expertise was not directly affected by the change might also have ignored information about the new requirements. Teachers of English, for example, may have disregarded the changes to the new graduation requirements because the curriculum and delivery structure of their courses had not been changed. Finally, the information bulletins simply may not have reached every teacher. The finding that over 17% of teachers did not indicate an awareness of the changes in graduation requirements seems to be consistent with the conclusions drawn by Lortie (1975), that teachers tend to focus more on their individual classroom responsibilities and less on the school as a whole. However, the results of the current study seem to conflict with the results of the Alberta Teachers' Association study in which all (100%) teachers of high school subjects indicated an awareness of the new requirements (1989a).

Sources of information. How did the teachers of Meadowview High School learn about the new graduation requirements? Table 15 summarizes teachers' primary sources of information about the new requirements. Of teachers who were aware of the changes, the most common sources of information were inservice or staff meetings (47.8%) and Alberta Education materials (40.6%). To a lesser extent, Alberta Teachers' Association documents (29%) also informed teachers about the modifications in the graduation requirements. Some 11% of respondents indicated that they learned about the changes from "other" sources. By way of comparison, teachers surveyed in the ATA study indicated that they had learned about the diploma requirements through from other teachers (40%), Alberta Education documents (84%), ATA documents (56%), inservices (20%), and other sources (4%).

Table 15

Teacher Sources of Information About the New Graduation Requirements

| | Meadowview Teachers | ATA Study Teachers |
|---|---|---|
| Inservice & Staff Meetings | 48% | 20% |
| Alberta Education Materials | 46% | 84% |
| ATA Documents | 29% | 56% |
| Other Sources, including word of mouth | 11% | 44% |

(These percentages add up to more than 100% because respondents were asked to check as many responses as were appropriate.)

Understanding and approval of the new graduation requirements. Approximately one-fifth of the Meadowview faculty indicated that they "thoroughly" understood the new requirements, with a further two-thirds responding that they "generally" understood them. Eight teachers (14%) rated their understanding as "a little." The teachers who were unaware of the changes, and those who knew only "a little" about them, represented almost 30% of the faculty. On the other hand, the ATA study found that 80% of teachers rated their understanding of the new requirements as "thorough," while 48% felt that they would like to know more about them.

The majority of the Meadowview teachers (81%) approved of the new graduation requirements, although only 10% completely approved, 30% approved with minor concerns, and 40% approved in general but with major concerns. Only 10% of teachers did not approve of the changes, and a further 9% had not yet decided how they feel about them. The results from this study compare favorably with those from the ATA study that found that 90% of teachers approved, 6% of teachers disapproved, and 4% had no opinion of the new diploma requirements.

Generally, teachers appeared to approve of the graduation requirement changes and have accepted them as regulation. However, an anomaly appears when they are asked how the requirements will affect the quality of education. About 29% believed the changes would increase the quality of high school education, 30% believed it would make no difference, and 16% believed it would decrease the quality of education. One-quarter of the faculty was undecided about the possible effects of the new requirements on the quality of high school education. The ATA survey results were similar: 24% believed the changes would increase the quality of education, 25% believed they would decrease the quality of education, 24% of teachers believed there would be no difference, and 27% were undecided or have no opinion. The large number of teachers (82%) who approved of the changes in the graduation requirements seemed to be inconsistent with their beliefs about the impact the changes would have on the quality of the high school diplomas. Only 59% (48% in the ATA study) believed that the changes will either increase the quality or make no difference to the quality of a high school education.

Almost 80% of teachers were in favor of the two diplomas, that is, the Advanced Diploma and the General Diploma, whereas only 12% were opposed and 8% were undecided. These results were similar to those expressed by teachers participating in the ATA study: 78% were generally in favor of two diplomas, whereas 14% were not in favor, and 8% expressed no opinion. It would appear that a substantial majority of teachers felt that the abilities of academic and non-academic students are better satisfied through the two-diploma streaming system. One consultant expressed his interpretation this way:

> The two streams, there's a degree of popularity I think--whether it's pedagogically sound or not, I don't think really was the question. But in terms of certain kinds of constituencies, I think that the idea of two streams was one which the government knew would be well accepted.

In the School Board's 1987 representation to Alberta Education regarding the new diploma structure, a single-diploma structure was advocated. However, teachers within Meadowview High School did not agree with the Board position. They favored two types of diplomas. The few teachers who opposed the two-diploma structure raised several concerns: employers and post-secondary institutions do not require a specific type of diploma; the General

Diploma is really very academic; there is potential for the development of elitist attitudes; curricular options are lacking; and the non-academic student is being short-changed. The feelings of teachers regarding diploma streams were consistent with the program delivery structure that exists in most schools. Elmore (1988) suggests that teaching is conceived as telling, that is, teacher directed, and teachers tend to instruct their classes as homogeneous groups with minimal recognition of individual differences among students. The "streamed" diploma structure would be consistent with teachers' perceptions of meeting the learning needs of groups of students in contrast with meeting the learning needs of individual students.

Changing the passing grade from 40% to 50% was the first policy initiative to be implemented as a result of the 1985 secondary education policy statement. In this study, 81% of teachers responded positively to raising the passing grade from 40% to 50% for the awarding of credits. Teachers in the ATA survey were 88% in favor of this change. In general, teachers commented that even the 50% mark would make it difficult for students to succeed at the next course level, and noted that the flexibility of switching to a different sequence stream would allow students to complete their diploma requirements.

Approximately the same number of teachers, both in this study and the ATA study, approved (47%, 43%) and disapproved (45%, 46%) of the increase in the number of compulsory credits in the new graduation requirements. Teachers favoring the increase believed that the new requirements would ensure that all students would now receive a stronger basic education. An increase in the minimum credit requirements for math, science, and social studies was viewed positively. In addition, there was some feeling regarding the lack of meaning of the former diploma system, that is represented through the following comments from one of the administrators:

> I personally always felt that there was a lack of requirements and when I look at some of the courses that students presented to get a high school diploma a few years ago, it always concerned me that it didn't seem to lead to anything in particular, but they were able to get that high school diploma. Some students took the path of least resistance in choosing their courses. In my mind, there were always some questions as to the amount of science that a student, for instance, should be taking. It seems we were pretty weak in science and the social studies. I always thought that there should be more than there was.

From this perspective, the new requirements were generally seen to strengthen the basic academic courses. The addition of the second stream of social studies, that legitimized what had been a Meadowview High School practice at the grade 10 level, was endorsed by teachers. Teachers supporting the changes commented on the benefits of greater educational uniformity throughout the province and the return to the tradition of a well-rounded education.

Teachers who were not in favor of the increase in mandatory course requirements expressed particular concern for the General Diploma student who was not bound for a post-secondary institution, indicating that the system favored the minority of students who were bound for university. Several interviewees suggested that the effects of the change would be to create an imbalance in a student's education. Comments such as the following are typical:

> Quite often, the people most concerned with graduation requirements are focusing on the Advanced Diploma which almost always means youngsters who are planning for university.
>
> I believe that certainly if academics are the heart of what we are about, then I believe that the complementary areas are the soul. And I believe that the heart and soul should essentially go together. I believe that we have kind of imbalanced it a bit, so that there's a touch, not very much, just a touch too much emphasis on performance in the academic areas, as opposed to some of the complementary areas. There's more to life than academics, is my belief.
>
> There is a really strong emphasis on academics, probably to the detriment and the eventual demise of many forms of practical experiences that kids have certainly benefited from and enjoyed in the past.
>
> There are increased credits in science, math, social studies, and there's only so many credits in a year and so many hours in a day. It will mean a shifting from elective areas to academic areas. You just don't have time, unless you want to do a four-year program. If you want the best education we can give you, it's going to take four years now, and not three.

Related to the concern about lack of opportunity to select options (complementary courses) were comments such as: "kids have to take courses they don't want," "they may have to spend longer in high school," and "they can't fit in the courses they want to take." Teachers still referred to these courses as *options*, an indication that they had not yet begun to use the Alberta

Education lingo for this category of subjects. Whereas some teachers viewed the reduction of student course choices as being an advantage because it reduced registration confusion, other teachers believed it to be a disadvantage because it limited program flexibility and lessened the opportunity to address individual student's interests. The issue of the number of mandatory subjects required for graduation is controversial among teachers; the arguments in favor of the increase appear to be as valid as those opposing the increase.

Although teachers may not have agreed with any or all of the components of the policy initiative, very few became involved in challenging them. One department head expressed the futility of attempting to communicate with Alberta Education this way:

> Alberta Ed doesn't care about teacher concerns. When they brought in the new Social 20 course, teachers all over the province complained about it. It made no difference. They have serious problems out there. It started with Mr. Lougheed. Mr. Lougheed said we weren't teaching enough Canadian history. At that point 67% of the K-12 Social Studies program focused on Canadian history, and he said we are not teaching enough of it. So, it shows you how misinformed he was.

Although none of the other participants in this study was so explicit, this viewpoint may be shared by other teachers, explaining teachers' failure to react to the new requirements and their seeming resignation to accept them as a fait accompli. Meadowview High School teachers had not been particularly vocal about discussing their opinions about the new graduation requirements either within the school or among colleagues in other high schools or at the district office. The exceptions were the science and vocational education department heads who wrote personal letters of concern to Alberta Education officials. While some science teachers followed the controversy in their subject area, they did little to influence the outcome. The Chair of the School Board, for example, explained, "I have lots of occasions to meet with teachers, and I talk to them. I'm not sure that I have really heard concern expressed about those requirements."

### Discussion of Teachers' Perceptions

The actions and beliefs of the faculty of Meadowview High School indicate that they understand the implementation of the new graduation requirements policy from the traditional top-down or classical control model. They understand the policy as a set of instructions and directions that Alberta

Education developed and that they are required to follow. Furthermore, they interpret their relationship with Alberta Education as being hierarchical in nature, and with their role being that of subordinate. They accept their place in the implementation because, to quote an Assistant Principal, "that is our role." For the most part, the faculty of Meadowview High School agreed with the thrust of the requirements and the need to add rigor to the high school program of studies. While frustration was expressed about specific effects of the policy initiative, there was no evidence of either overt or covert action designed to impede the implementation. At Meadowview High School, the new graduation requirements were passively and automatically accepted as a set of instructions and directions imposed through the legal authority of Alberta Education.

Impact of the New Graduation Requirements on Teachers

The new graduation requirements are challenging most teachers to change. The impact of some of the changes are minor, and others are major, as the following comments suggest:

> Less options for students, less space to take the courses that I teach, second and third languages.
>
> I have to teach outside the area I was trained to teach.
>
> Teaching the CALM course has been one of the most exciting courses I've had to teach. It's added a lot to my life.
>
> We have new textbooks to use, more time is spent learning about them and how to fit them into the curriculum.
>
> In my courses, we are more often pushed into the situation where we have combined classes where we have students coming and going at different times. It can be very stressful.
>
> The problem is in implementing the new social studies courses. They are poorly designed, there's improper articulation and the textbooks are atrocious.

The math department head thought that "the changes haven't affected the teachers that much, and I don't think that the general public knows anything about them." Clearly, the impact of the new graduation requirements has affected individual teachers differently.

Job security is an issue for vocational education teachers. The downturn in the economy and the declining student population during the mid-1980s were factors that contributed to the general decreased need for vocational teachers. These factors, combined with the new graduation requirements, meant that vocational education teachers have been hit with what the vocational education department head called "a double whammy." An increase in the parameters for class sizes in vocational classes from 16 to 22 has further decreased the need for vocational teachers. Further reductions in the enrollments for complementary subject areas are predicted in the future because of the increased mandatory core courses, causing additional concern. A few of Meadowview's vocational teachers have undertaken to upgrade themselves to teach academic and/or core subjects, but as the department head stated, other teachers,

> people approaching 50 [years old], are looking down the road to retirement, and one can see a reluctance. Let's assume one has five, six, or seven years left and you are looking at going to university, night school, summer school, that kind of thing. Of course, there is a reluctance.

The school district has been supportive of teachers wishing to transfer into academic areas by giving the highest priority to teachers requesting sabbatical leaves for retraining. An area superintendent suggested that returning to university was not always necessary because

> we offer numerous inservices in this district where, you could, if you take the time to go, you could probably do a pretty good job of getting yourself into another subject area.

He further commented that professional improvement was both an individual and a district responsibility--not solely that of the district.

The overall consequence of surplus teachers whose major subject expertise is in the areas of practical arts or fine arts affects core subjects. Several department heads expressed concern about the placement of teachers deficient or lacking in subject area expertise in their departments. One department head put it this way:

> Teachers who teach in more than one department get stressed out because they have to attend a lot of extra meetings. Some teachers enjoy the break, but that's not the case for every teacher. You take the building construction teacher, he's got to teach chemistry. That's not easy to do, not even if he's got some chemistry. But I don't know what you do with these people. It's a humanitarian concern.

Generally, vocational education teachers can choose to remain on the faculty of Meadowview High School by preparing themselves to teach in subject areas, such as CALM, where enrollments are increasing.

While the new graduation requirements increase the number of credits students must obtain in math, social studies, and science, additional teachers may not be needed to teach these additional courses. In social studies, for example, a projected decline in the enrollments for the complementary courses of psychology, sociology, economics, and geography will release teachers to teach Social Studies 20, 23, 30, and 33. In math, the need for additional staff will be minimal; in science, the number of teachers needed for the introduction of Science 10, 20, and 30 may be offset by the deletion of the Biology 10, Physics 10, and Chemistry 10 programs.

Introducing the new CALM 20 course also had implications for teachers. In addition to recruiting teachers to present it, teachers required inservicing to become familiar with it. At Meadowview High School, interested staff members volunteered to teach the program and attend the necessary inservices. The teachers selected to teach CALM were then redeployed from teaching assignments in declining enrollment complementary courses.

At Meadowview High School, the requirement for 10 credits in a "C" option course for Advanced Diploma students has increased the registration in French 10. Three additional sections of French 10 were added to the course offerings in 1989-90. Appropriately qualified teachers were assigned to instruct the classes. Interestingly, although vocational education courses qualified for inclusion as "C" options, enrollment in this area continued to decrease. The principal indicated that "there has definitely been a trend for students to enroll in sort of more academic kinds of option programs," thereby creating a need for teachers in modern languages. The changing enrollment patterns and the consequent shifting of teacher assignments at Meadowview Composite High School can be attributed, in part, to the new graduation requirements. Teachers who wish to remain on staff at the school can assure their continued tenure by updating themselves to teach core subjects. Transferring to another school is an option for displaced vocational teachers, but other high schools have their own surpluses and junior high schools are not as likely to have specialized vocational programs, thereby forcing these teachers to become generalists.

### Discussion of the Impact of the Changes on Teachers

The overall impact of the new graduation requirements on teachers varies considerably from individual to individual. For some teachers the challenge of a new teaching assignment was viewed as a positive growth opportunity, while for other teachers the same challenge created distress. The primary concern expressed by all teachers was related to how they personally would be affected by the change: their verbal comments indicate that overall policy goals are not of immediate import. These findings are supported by Fullan and Stiegelbauer (1991) who suggest that the nature of teaching forces teachers to function independently and in isolation from each other. While teachers have the autonomy to decide how they will spend their time and energy and what they will spend it on, their perennial problems relate to lack of time, time demands, and the feeling of not finishing their work. The time factor is compounded when unwanted changes are forced upon teachers.

In analyzing the teachers' perspective, Fullan and Stiegelbauer stress (1991) the need to distinguish between "the change" and "the change process" (p. 127). The key point is to focus on what the meaning of the change is for teachers. As teachers assess proposed changes to determine how much time and effort they will put into a particular change, Fullan and Stiegelbauer maintain that they use four criteria:

> 1. Does the change potentially address a need? Will students be interested? Will they learn? Is there evidence that the change works and that it produces claimed results?
> 2. How clear is the change in terms of what the teacher will have to do?
> 3. How will it affect the teacher personally in terms of time, energy, new skills, sense of excitement and competence, and interference with existing priorities?
> 4. How rewarding will the experience be in terms of interaction with peers or others? (pp. 127-28)

The questionnaire data indicates that teachers at Meadowview High School supported changes to the new graduation requirements. Similarly, the majority believed that they understood the projected changes. In spite of giving their support to the changes, teachers were uncertain as to whether the new requirements would have a positive impact on the quality of education and were, therefore, uncertain as to whether to invest their time and effort in a change that had not yet proved itself. Although the secondary education policy claimed to have strong benefits for students, about half of Meadowview's teachers did not seem willing to accept the claim without evidence that their students would benefit.

The third and fourth criteria, relating to whether the rewards would be at least equal to their personal costs, was a concern that most Meadowview teachers had not resolved regarding the new graduation requirements. The highly personal nature of change mandates that each teacher must have the opportunity to work through the new experience in a such a way as to at least balance the personal benefit/cost ratio. Without some assurance that their time and energy would result in positive gains for their students and personal satisfaction, many teachers were hesitant to commit themselves to the change.

In attempting to understand the meaning of the change to the teachers at Meadowview High School, it is critical to understand the reality of the change from their perspective. The new graduation requirements were conceived by legislators and administrators from a perspective distinct from that of the teachers and, no matter how well a policy is grounded in sound theory and practice, it must be clear, credible, and offer the potential of positive rewards for those involved in implementing it. Fullan and Stiegelbauer (1991) draw attention to the fact that change is a process, not an event, and teachers need opportunities to experience the change in order to gain a fuller understanding of it.

The next section will report on the findings of that part of the questionnaire designed to determine the focus of teachers' concerns.

## Teachers' Stages of Concern About the Innovation

The Stages of Concern About the Innovation Questionnaire (SoCQ) is a commonly used instrument that focuses on the psychological orientation of both users and non-users to a particular innovation or change. By assessing attitudes towards an innovation, Hall hypothesized the existence of seven stages of concern (1979). A discussion describing the SoCQ is presented in Chapter 3. Appendix E presents charts detailing the characteristics of each stage.

By way of a brief review, a concern is defined as the "composite representation of the feelings, preoccupation, thought, and consideration given to a particular issue or task" (Hall, George & Rutherford, 1986, p. 5). There are seven stages of concern, ranging from 0 through to 6. Stages 0, 1, and 2 relate to self-oriented concerns; Stage 3 is a task-management concern; and Stages 4, 5, and 6 are impact types of concerns. Hall, George, and Rutherford (1986) hypothesize that, as individuals move from unawareness and non-use of an innovation into beginning use and more highly sophisticated use, their concerns form a progression wave indicative of their "growth sequence" (p. 34). Interpretation of the scores provides insight into both the type and intensity of the concern as well as the affective stance that the individuals are taking towards the innovation.

This section presents the results of the teacher SoCQ and provides an interpretation of them. The interpretation of peak scores, second highest scores, lowest scores, and second lowest scores has been carried out with group, as opposed to individual data. The scores are directly related to the stage definitions: the higher the score, the more intense the concerns at that stage. Additionally, several analyses were conducted using demographic data variables.

Hall, George, and Rutherford recommend two ways of treating group data (1986). The first way is use the stage scores of each individual to tally the number of individuals who are highest, lowest, etc., at each SoC. Table 16 indicates the frequency of individual scores for the various SoC. Hall, George and Rutherford (1986) offer the following guidelines with respect to the interpretation of SoCQ data:

> 1. Establish a holistic perspective by striving to develop a gestalt based on all the SoC scores noting those which are high and which are low, and what the person seems to be indicating about his/her concerns.
> 2. Look at the *relative* high and low stage scores not how high or how low the score is in relation to other SoCQ data.
> 3. Look at the individual item responses to determine if patterns, trends and irregularities exist.
> 4. Look at the total score to determine the amount of involvement individuals have with the innovation. Generally, a low total suggests a low intensity of concerns and a comfortableness with the innovation while a high total percentile score is indicative of definite feelings and involvement with the innovation which may be either negative or positive. (pp. 53-55)

The faculty of Meadowview High School had the highest percentile for Stage 0: *Awareness* SoC about the innovation. This indicates that they are non-users who have low concerns about the change, that is, they are just becoming aware of the innovation, or they have little concern about or involvement with the innovation. A second interpretation of a high Stage 0 is that the users have low concerns about the change because they are well experienced with the innovation and are more concerned about other things not related to it. Both situations relate to the teachers' self-oriented concerns: they have not yet begun to consider task-and-impact concerns. A few teachers, who may have worked their way through the various stages of concern, have accepted the changes as they affect themselves and, in so doing, have alleviated any anxieties they may have felt.

Table 16

Frequency of Concerns Stage for School Faculty

| Number of Individuals | Stages of Concern* | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| Highest percentile | 27 | 14 | 10 | 2 | 0 | 1 | 5 |
| 2nd highest percentile | 12 | 19 | 16 | 3 | 2 | 4 | 4 |
| 2nd lowest percentile | 3 | 0 | 2 | 8 | 16 | 15 | 16 |
| Lowest percentile | 4 | 1 | 3 | 9 | 17 | 20 | 6 |

*Stages of Concern:

| | |
|---|---|
| 0 | Awareness |
| 1 | Informational |
| 2 | Personal |
| 3 | Management |
| 4 | Consequence |
| 5 | Collaboration |
| 6 | Refocusing |

Hall, George, and Rutherford (1986) suggest that the second highest SoC is often adjacent to the highest SoC based on the assumption that the nature of concern is developmental. A pattern exists for this data bearing out the validity of this assumption and indicating that the second highest stage of intensity is Stage 1. This stage, called *Informational*, relates to substantive aspects, that is, the nature of the innovation, and indicates that the faculty were interested in learning more detail about the change. Stage 2, *Personal Concerns*, are generally closely associated with Stage 1 concerns, and this generalization holds for the sample data in this study. Faculty members were uncertain about what demands the innovation would put on them personally and their adequacy in meeting those demands. The data in this study indicate that the Meadowview High School faculty was generally most apprehensive about self-oriented concerns regarding the new graduation requirements.

The lowest mean scores occurred for fourth, fifth, and sixth Stages of Concern. These three stages relate to the impact of the innovation and, for the present study, indicate that the faculty as a whole had minimal concern about the impact of the use of the innovation on students, was not collaborating and cooperating with others regarding the changes, and had not considered alternatives to the innovation. The total score reflects, to some degree, the amount of involvement participants have with the innovation, but Hall, George, and Rutherford caution against giving it a large degree of significance in the overall interpretation of the SoC (1986). This mean for the total score for teachers at Meadowview High School was 54.1, indicating medium intensity of concerns, involvement, and comfort with the changes.

The second way of treating the data is to aggregate individual data by developing profiles for various groups within the sample. Non-users' concerns are the highest on Stages 0, 1, and 2 and the lowest on Stages 4, 5, and 6 and, while there may be some variation in the intensity of these concerns, the general shape of the pattern is as plotted on Figure 2 (Hall, George, & Rutherford, 1986, p. 36). The mean scores for each SoC within each subgroup of the Meadowview High School faculty are represented graphically in Figure 3: Stages of Concern Profile of Faculty. All of the profiles developed for the data of the faculty at Meadowview High School are typically those of Non-user SoC. This profile is representative of individuals who are somewhat aware of and concerned about the innovation and are interested in learning more about the innovation from a slightly proactive perspective. When individuals' concerns are most intense at Stages 0, 1, and 2, they are moving from unawareness and non-use of the innovation into beginning use. The faculty does not have many management concerns (medium intensity Stage 3) and are not concerned with the consequences of the innovation for students (low Stages 4 and 5). The Meadowview teachers' SoC profile was very similar to the profile described for non-users up to this point. At Stage 6, the typical non-user profile tails-off, indicating that individuals had not developed alternatives or improvements to the innovation. The data in this study tails-up, meaning that participants have ideas about how to do things differently,

Figure 2

Stages of Concern Profile: Typical Non-User Profile

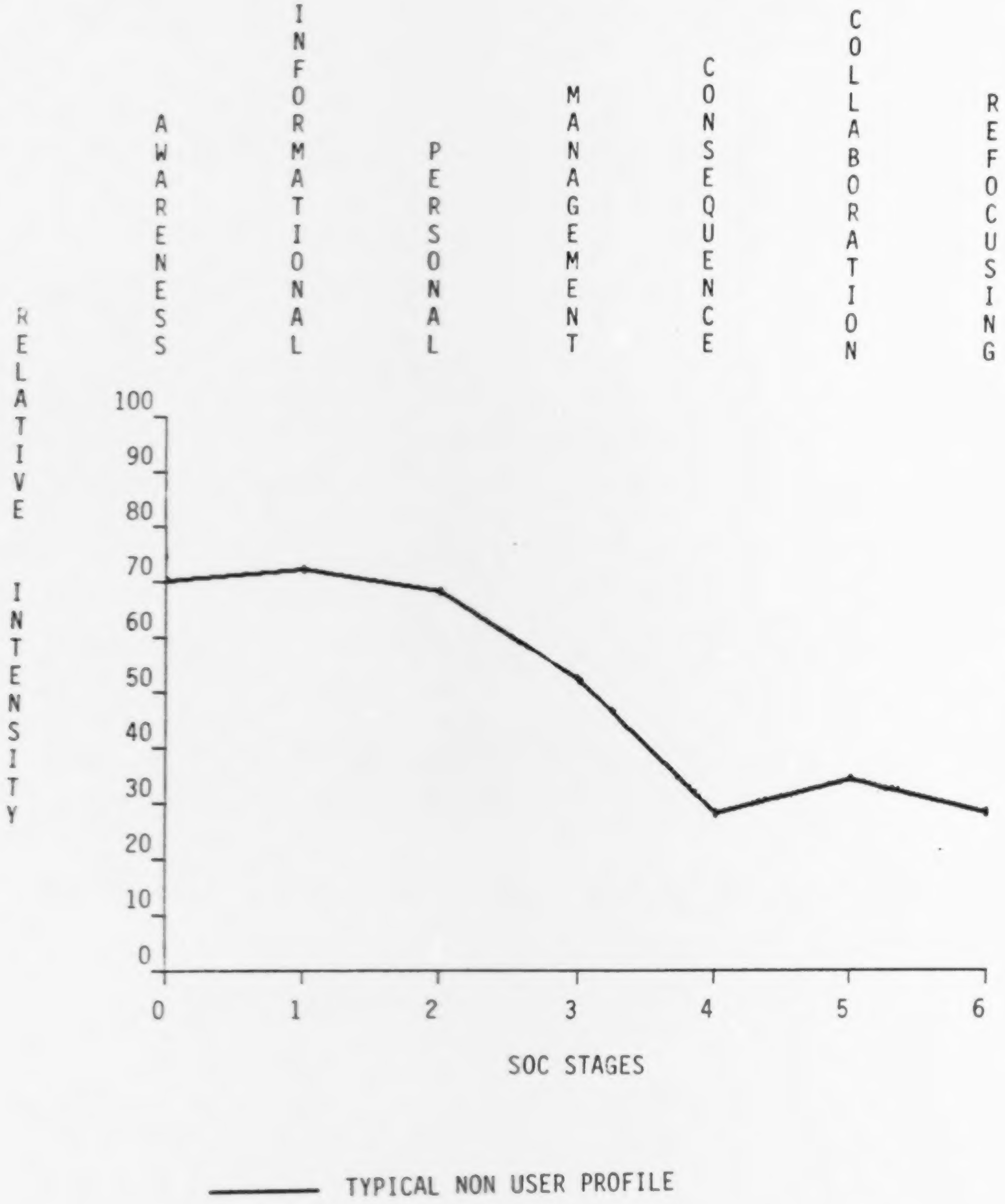
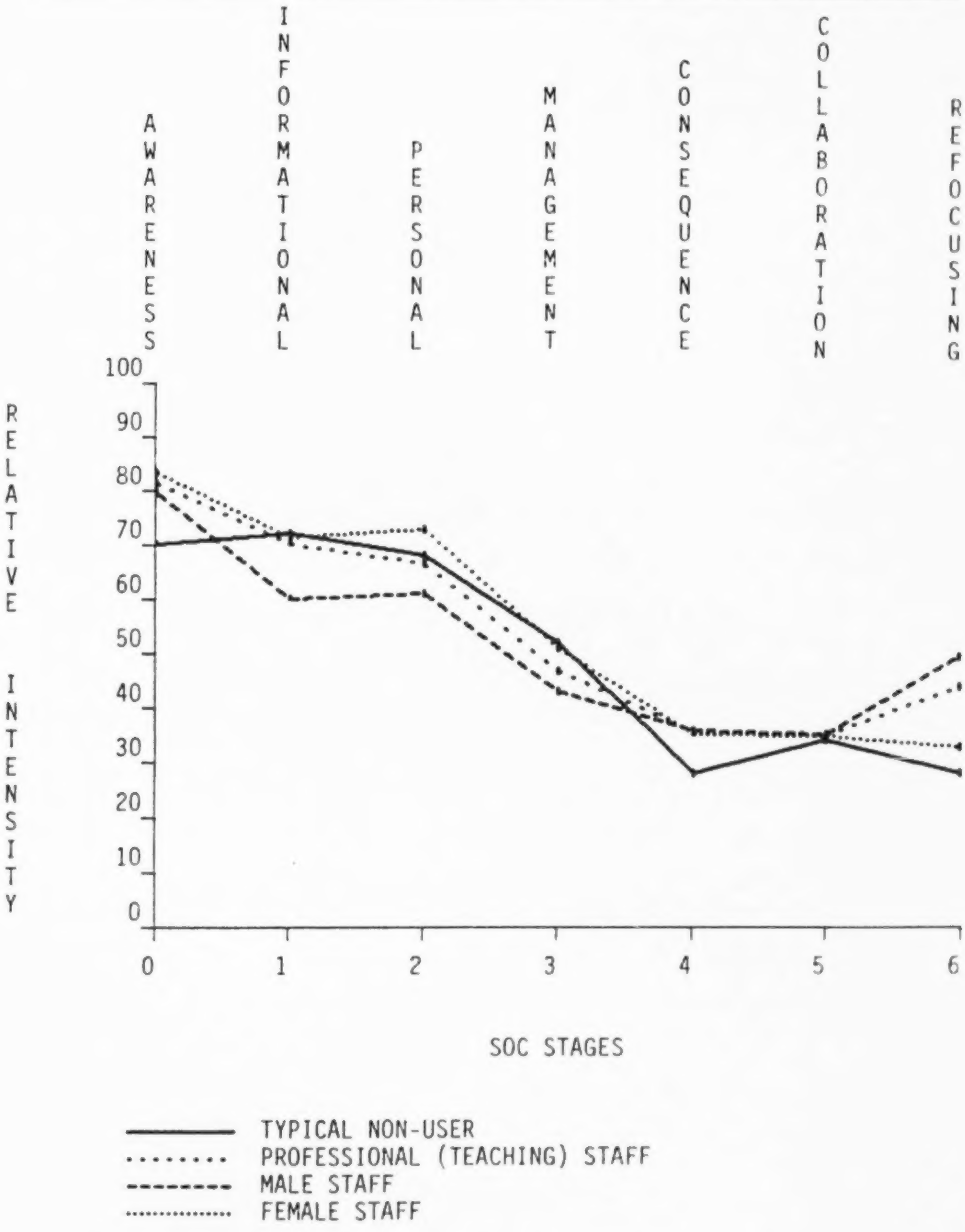


Figure 3
Stages of Concern Profile for Meadowview High School Faculty



and they were likely to be negative towards the innovation. Hall, George, and Rutherford (1986) suggest that the overall profile "reflects the interested, not terribly over-concerned, positively disposed user" (p. 36). The tailing-up, that is, the increase in the intensity of concerns for Stage 6 of the participants in this study, indicates that the Meadowview faculty members had other ideas that they believed had more merit than the concepts included in the innovation. The questionnaire and interview data substantiated this finding. The tailing-up in this instance is more than the seven to 10 points and is regarded by the authors as a potential warning of possible resistance to the innovation.

Appendix F presents the SoC profiles of the SoC of faculty according various variables. The SoC of faculty according to their professional teaching assignment (Figure F-1) most closely resembled the typical non-users' profile with the exception of the tailing-up phenomenon. It may be that teachers resisted the changes or were negatively disposed towards them. Counsellors and administrators show relatively lower intensity scores for the informational, personal, and management stages and did not exhibit the tailing-up score for Stage 6.

The profiles the SoC by Years of Teaching Experience and Years of High School Teaching Experience (Appendix F: Figures F-2 and F-3) generally, correspond to the profiles of non-users. An examination of the SoC profile by years of high school teaching experience reveals several deviations from the typical non-users' profile that merit comment. Teachers with six to 10 years experience demonstrated an increased intensity of personal concerns, which illustrated individuals who were much more concerned about their personal position and well-being in relation to the change than they are in learning more about the substantive aspects of the change. Teachers with fewer than six years of high school teaching experience were the only subgroup to demonstrate tailing-off of the refocusing SoC and are not likely to resist the innovation. Of interest is the fact that teachers with over 21 years of experience had lower relative intensity scores than teachers with less experience on most of the seven stages.

The SoC profiles by subject area taught (Appendix F: Figures F-4, F-5, and F-6) are also typical of non-users, except for the tailing-up phenomenon at the refocusing stage. Scores for teachers of core non-academic and complementary subjects were slightly above the score of typical non-users in the third SoC relating to tasks, issues, and processes such as organizing, managing, and time demands relating to the implementation of the changes. In addition, scores for teachers of complementary subjects were above the norm and the scores of core subject teachers in Stage 6, refocusing. Teachers of these subjects were likely to have definite ideas about alternatives to the new graduation requirements and had explored the possibility of major changes to or replacement of the policy initiative. This finding is consistent with the findings from other data collected in this study. The increased requirements for credits in core courses had created concern about the future of programs in the complementary courses, and the associated anxieties were likely to be the reactive response from this group of teachers.

### Discussion of Teachers' Stages of Concern About the Innovation

In this study, the SoC was used to contribute to the understanding of how the faculty of Meadowview High School reported their feelings, beliefs, and assessment of the new graduation requirements. Past experiences and associations with Alberta Education directives, together with personal involvement with the new requirements, stimulate the development of an individual's concern about the change. For this reason, Hall, George, and Rutherford (1986) caution that a person's perceptions are not necessarily the reality of the situation. They are each individual's perception of reality.

The Stages of Concern profiles of the Meadowview faculty are indicative of non-users who were somewhat aware of and concerned about the innovation and who were interested in learning more about the projected changes. Building upon the Fullan and Stiegelbauer concept of change as a process, (1991) the faculty appeared to be in the earliest stages of the process. Teachers' concerns were most intense about identifying what the new graduation requirements were and what this innovation entailed. They were interested in having more general information about the changes, what they would do, and what use would involve (Hall, George, & Rutherford, 1986). Significant concern was also expressed about factors pertaining to personal or "self." The SoC component of the teacher questionnaire found that ego-oriented questions and uncertainties about the changes in the graduation requirements concerning status, reward, and potential or real effects of the change were similar to those found through the open-ended component of the teacher questionnaire. These findings, although established through differing techniques, reinforced each other and draw attention to the importance of implementers' understanding the meaning of the change in the implementation process.

Teachers' realities were different from the realities of the policy makers who outlined the new graduation requirements. Although it could be argued that 16 months into the official implementation period teachers' concerns should have evolved into the management stage, this was not the case. Several explanations as to why this occurred are plausible. First, teachers did not seem to have developed a commitment to the new graduation requirements. Although information about it was forthcoming from several sources, teachers may not have felt sufficient concern about it to put forward the time and effort required to become committed to the changes. Second, teachers may not have thought of the change as having a significant impact on themselves personally. Programming, timetabling, counselling, and initiating are traditionally not the specific responsibility of classroom teachers, and they may have assumed that other faculty members would be accountable for the implementation. Third, given the many ongoing and more immediate classroom-teaching-learning responsibilities of teachers, they were likely to have had other tasks of higher priority on which to focus their limited time. Firestone and Rosenblum (1988) found that high school teachers had a limited interest in major policy decisions, and this may have been the case for the Meadowview teachers. It is likely that each of these explanations factored into the SoC findings that the teachers of Meadowview High School are typical of non-users of the new graduation requirements.

### Parents

Data about parents' perceptions of and reactions to the new graduation requirements came from one primary source: questionnaires. Data were collected through questionnaires completed by the parents or guardians of students enrolled in the CALM course at Meadowview High School during the first semester of 1989-90. A copy of the parent/guardian questionnaire is found in Appendix D. The design of this research study did not include interviews with parents; however, interviews with the chairperson of the School Board, school, and central office-based administrators, department heads, and Alberta Education officials included questions relating to interviewees' understandings of parental response to the new graduation requirements. Supplementary data from a study conducted by the Alberta Teachers' Association were introduced, as appropriate, for comparative purposes.

Demographic data about the parental component of this study indicate that they represent a somewhat typical group of high school parents and guardians. The majority (83%) of parents and guardians in this study ranged in age from 35 to 50 years of age with approximately equal numbers being below 35 and above 50. Most were employed (75%), while 10% considered themselves to be homemakers. Five percent were unemployed, and 10% did not indicate their occupation. The largest group of respondents were mothers (71%), followed by fathers (25%), and then guardians (4%). Of the 85% of participants who revealed their annual household income, approximately one-third fell below $25,000, one-third ranged between $25,000 and $40,000, and the remaining third was above $40,000. The number of parents or guardians who responded on behalf of sons was equal to the number of responses made on behalf of daughters.

It appears that Meadowview High School parents had very limited knowledge about the change in graduation requirements. Data from the questionnaires indicate that only 35% of respondents had heard about the new requirements. These findings were consistent with those found in the Alberta Teachers' Association study which reported that about one in three of the 281 parents of high school students who participated in their survey were aware of the new requirements (*ATA News*, 1990). This factor had important implications for other responses or, more accurately, lack of response to or lack of opinion regarding specific aspects of the new graduation requirements. Approximately 66% of participants in this study did not answer or were not familiar enough with the details of the changes to express their opinion on questions dealing with particular components of the new diploma requirements. For this reason, caution must be used when interpreting the remaining data.

Within the parental group who expressed an opinion about the new graduation requirements, the extent of their understanding about the requirements varied considerably. About 22% indicated that they knew almost everything about the new diplomas, 22% knew enough to give their children advice, 37% knew only a little about the changes, and 18% admitted that they did not know very much. The parents familiar with the changes indicated that they had been informed through various sources. The majority (57%) learned about them from their children and/or through school newsletters. Other sources of information included media, 18%; school meetings, 14%; friends, 11%; and other sources, 11%.

Of parents who were aware of the new requirements, 63% approved completely or had minor concerns, 15% approved but had major concerns, and 4% did not approve of the changes. High school parents participating in the ATA study expressed similar opinions: 58% approved completely or with minor concerns, 14% approved with major concerns, and 11% did not approve at all. The number of responding parents who felt the changes would increase the quality of education (44%) is equal to the number of parents who were not sure if the new requirements would affect the quality of education. Only 11% of parents felt the changes would not make any difference. Parents participating in the ATA study expressed different opinions: 42% believed the quality of education would be increased, 17% believed it would be decreased, 22% believed it would make no difference, and 19% could not say or had no opinion.

Parents who were aware of the dual diploma structure were overwhelmingly in favor of the change (82%). A small minority (7%) were opposed to two diplomas, whereas 11% of respondents indicated that they were not familiar enough with the concept to express an opinion. In the ATA study, almost the same number of parents who were aware of the two-diploma structure (81%) favored it, while a slightly higher number (12.5%), opposed it. Generally, those favoring two diploma streams believed that it best served the differing ability levels of students.

The Advanced Diploma was believed to be motivating and challenging for those students with academic talents intending to pursue higher education. The General Diploma was seen to serve the needs of those students who were unable or disinclined to succeed in the more academically oriented program. Parents opposing the dual diploma structure listed a variety of reasons for their opinions, including the possible creation of two classes of students, the lack of time available for options, and the undue attention being focused on the Advanced Diploma. Most participating parents (85%) felt that it was the right of all students to earn a high school diploma.

Almost half of the respondents favored the balance of credits among courses, although 90% indicated that they were not aware of the specific changes to individual subjects. The data presented by the 10% of respondents who were aware of changes to specific subjects lacked reliability and, with the exception of the Career and Life Management course, did not merit reporting. Over 34% of participants offered an opinion about the CALM course; 89% favored the course.

Parents were definitely more aware of the CALM course than other course changes. The fact that it was a new course and that it required student/parent interaction likely contributed to its enhanced profile. The ATA study of high school parents found that 71% of parents who were aware of the course favored it, 16% were not in favor, and the remainder had no opinion. About half of the parents favoring the course supported general life skills concepts or the ability to adapt to modern society, whereas those opposing the course suggested that the course was useless, taught students nothing, took time away from more important courses, and could be better taught at home by parents (Alberta Teachers' Association, 1989a).

Initially, some educators were concerned about the possible reaction of parents to the introduction of CALM, especially the unit on sexuality. Through the initiative of the district CALM consultant, the district high schools developed a process to inform parents about the course and to provide them with an opportunity to express their opinions. At Meadowview High School, the school administration was proactive in familiarizing the parent advisory committee with the course, kept them up to date with the implementation plan, and received their input about effective implementation strategies. During the pilot testing of the course, students in all three grade levels were granted access to the course. The parent group was involved in assessing the evaluation of the pilot testing and actively supported the limitation of the program to only grade 11 and 12 students in future years. Early in the official implementation school year, a letter informed parents of all CALM students about the course and its content and encouraged them to communicate their concerns to the school or the teacher. The department head indicated that the response was "nothing." The principal indicated that he had had only one parental inquiry about the new CALM course and it was

> a mild kind of phone call, kind of asking a rhetorical question, "are you sure that this teacher should be doing this unit in this way?" When I got the background on the situation and the parent got the total context within which this one activity was taking place, they then felt more satisfied. It was just sort of a communication thing between the child, the home and the teacher.

The anticipated parental reaction to the CALM course did not materialize at Meadowview High School, much to the relief of the school's administration and faculty.

The only other subject that was of concern to parents was the science program. The science department was aware of lobby groups of parents and others in the city and of letters to the editor indicating a general dissatisfaction with the structure of the program. The department head indicated that none of the Meadowview parents had expressed an opinion directly to him and, to his knowledge, none of his teachers had been contacted.

Educators from Meadowview High School, the School District, and Alberta Education expressed their impressions of parental perceptions of the new graduation requirements through the interview process. Typically, the interviewees indicated that parents had not shown any concern regarding the changes. An assistant principal summed up his experiences with parents this way:

> Actually, I can't say there has been a lot of contact that I have had with parents that relates to the high school diploma requirements. I sort of get the feeling they have accepted it.

This response was echoed by all of the department heads interviewed and by central office personnel. The math consultant speculated that "many of them [the parents] don't seem to be aware that there really is a change."

## Discussion of Parents' Understandings of the New Graduation Requirements

This study found that parents of Meadowview High School were not particularly knowledgeable about the existence of the new graduation requirements, and a relatively small number categorized themselves as knowing "a lot" about them. The majority of parents who were aware of the changes support them. The dual diploma system, the introduction of the CALM course, and the change in the grade required to pass a course received substantial backing.

It can be inferred that the lack of parental knowledge, involvement, and concern about the new graduation requirements policy indicates that parents believed that the policy was implemented from a top-down perspective. In other words, as external stakeholders in the policy process, the parents of Meadowview High School students understood and accepted the authority of the government, Alberta Education, the School Board, and the school to set regulations and implement them with minimal parental involvement. The data provided no evidence that the parents thought of policy implementation as involving either a political bargaining or cultural evolutionary process. Meadowview parents were generally uninvolved, somewhat uninformed, and perhaps even apathetic to the introduction of the new graduation requirements. These characteristics typify the feelings of hopelessness experienced by the grassroots stakeholders who understand the process of policy development from the top-down, classical control perspective.

## Students

In this study, student data were collected through a questionnaire administered to all 98 Meadowview students enrolled in the first semester of the CALM course during the 1989-90 school year. Table 17 indicates the grade level of participating students. Seventy-nine percent of the students in this study were in their second year of high school, grade 11, while 15% were in grade 10, and 6% were in grade 12. Slightly more boys (56%) than girls (44%) participated in the study. A majority of students (58%) planned to spend at least three-and-a-half (27%), four (31%), or more (1%) years in high school.

Table 17

Grade Level of Participating Students

| | Percentage of Students |
|---|---|
| Grade 10 | 15 |
| Grade 11 | 79 |
| Grade 12 | 6 |

The post-graduation plans of participating students are indicated in Table 18. The Meadowview students surveyed in this study (83%) had made decisions with respect to their plans after completing high school; the largest number, 42%, planned to attend university, a further 35% intended to attend a technical school or community college, while 9% had other plans. Only 7% of students intended to enter the work force upon completion of high school.

Based on their current marks, the majority of students (77%) expected to complete all of the requirements for the diploma program in which they were registered. A further 22% were uncertain of their ability to complete the requirements for their diploma, while only 1% felt they would not be able to complete them. Students commenting about the uncertainty of completing their requirements gave several reasons: inability to pass one or more courses, conflict with a teacher, unclear about requirements, poor attendance record, and desire to quit school. After one-and-a-half years in high school, students were generally optimistic about their ability to attain the goals they had set for themselves.

Almost 60% of the participating students were enrolled in the General Diploma program, while 38% were following the Advanced Diploma route. When questioned about why they chose the diploma pattern they were following, students gave a variety of responses. Several students (24%) felt it was the best route for entrance into university, college, or technical school; others (17%) felt it was the key to a good job. Some students selected their diploma program according to the number of course choices permitted (27%); others selected their program based on the flexibility offered in relation to high school completion (18%); and academic opportunities (12%). Interestingly, only a small number of students indicated that their choice was influenced by significant adults: parents seemed to have the most influence (15%), followed by guidance counsellors (8%), teachers (6%), and administrators (1%).

Students seemed to have the greatest understanding of the requirements for a General Diploma. Over 93% indicated that they understood the course requirements and credits needed to achieve a General Diploma very well or somewhat, as compared to only 80% who indicated similar knowledge about the Advanced Diploma. This finding correlates with the fact that the majority of students (60%) in this study were enrolled in the General Diploma program and were more likely to be knowledgeable about the basic high school diploma program than the advanced one that is relevant to fewer (38%) of students.

Table 18

Post-Graduation Plans of Participating Students

| | Percentage |
|---|---|
| University | 42 |
| Technical school or community college | 35 |
| Attend other post-secondary institution | 9 |
| Enter work force | 7 |
| Uncertain or no plans | 17 |

Most students believed that the Advanced Diploma was more rigorous than the General Diploma. Students identified many concepts about the two-diploma system, some accurate, some less accurate:

> The General Diploma is the easier one, but it doesn't get you into university. The advanced is very difficult [student's emphasis], all the hard courses are required, but it can be used to get into university.
>
> One goes at a faster pace than the other and is a bit more harder [*sic*]. In general you can take more of a selection of courses.
>
> Advanced takes extra work and responsibility, but it doesn't allow for much training in the trades areas.
>
> You need to be enrolled in higher level courses and have good marks for advanced. The general one is a little more lenient. For an advanced you need to have all core subjects in the 30 level, e.g. Math 30, English 30, Chem 30. The General Diploma allows you to take the lower, less difficult courses.
>
> The General Diploma lets you have the decision of choosing the level of difficulty and advanced you must stick to a certain level. The general lets you take shop (i.e., automotives, welding) while advanced you can only take academic courses.

The Advanced Diploma was understood to have a greater number of required courses, especially at the 30 level, in science and second languages; more challenging and difficult, higher academic courses, that is, the 10, 20, 30 stream as compared to the 13, 23, 33 stream; a heavier work commitment on the part of the student; fewer choices respecting options; and higher achievement standards. Generally, most students saw a definite distinction between the two diplomas and had a basic understanding of the structures that contributed to the differences.

Only a few students suggested that the differences between the diplomas were minimal or negligible:

> They don't differ. No one can tell me the difference. I don't know and I want to know.
>
> No difference.
>
> I don't think they are different. There's no difference.

Many of the students who indicated that there was no difference between the diplomas regarding their difficulty, standards, and course selection recognized that the diplomas did differ with respect to entry into post-secondary institutions and future job opportunities:

> If you have an Advanced Diploma you're going to get accepted before someone with a General Diploma. The student will get a better chance in future job opportunities if they have an Advanced Diploma.
>
> An advanced will give you better courses for post-secondary school. Advanced will be better for university, etc. An advanced will show the employer that the applicant is a hard worker.

Although these students may not have seen the specific differences in the structure of the two diplomas, it is clear, nevertheless, that they were quite aware of the possible long-range implications of each type of diploma.

The General Diploma was seen by some students as being less restrictive and more flexible in that it offered the freedom of more optional course choices:

> The only difference is that if you're going to get a General Diploma you can take more options.
>
> General allows almost anything to be chosen--only has basic requirements. Advanced is narrower, not much room for variation and electives.
>
> In advanced you have everything picked out for you. You have no time for any "fun" courses, because you need the spares for studying or catching up on sleep (long nights of homework). In the general, you have an incredible amount of flexibility.
>
> In advanced, there are a lot of classes that you must have whereas in general there are a minimal amount of courses that you must have and more freedom of choice as to what courses to take.

While the General Diploma was believed to be easier, a few students felt that it provided a broader range of courses in that the student could select special-interest courses such as "shop," art, and drama.

On the other hand, other students saw the Advanced Diploma as offering increased flexibility of choice regarding entrance into post-secondary institutions and entry into selected careers. Students who viewed the Advanced Diploma from this perspective made comments such as:

> The advanced is harder, but better. It'll get you more places.
>
> Advanced is harder to get but you can get any job with it.
>
> The advanced will get you in (university, NAIT, Grant MacEwan, etc.) easier.
>
> People will look for an Advanced Diploma because they'll think that they have a better chance at succeeding than a person with a General Diploma.

Using a wide range of words, students conveyed a strong feeling that the Advanced Diploma was better that the General Diploma.

In response to a question about the difference in the diplomas with respect to entrance requirements for post-secondary institutions, the following student responses are typical:

> University. You need an Advanced Diploma.
>
> You stand a better chance with an Advanced Diploma.
>
> You have a better chance of being accepted with an Advanced Diploma because it is a higher achievement.

Many students were under the misapprehension that a diploma was required for university entrance. Only one student was able to state succinctly and accurately that "you just need the courses and credits for the particular faculty." Another student believed that "Advanced Diplomas are mostly for university only, but could be used for college" while "General Diplomas are for college only."

Students generally recognized that each diploma met their particular needs, interests, and abilities. Many students suggested that the Advanced Diploma had higher standards and was for "honors" students. The General Diploma was seen to be a basic education program for "regular students." The wide range of responses indicate the various perceptions that students held with respect to the new graduation requirements. It was clear that students knew about the two diplomas, but the accuracy of their knowledge varied considerably.

Concern about the possible emergence of a "second class citizen," that is, the General Diploma student, was a concern about the new graduation requirements. Students most frequently responded negatively to a question asking whether the diploma program a student was enrolled in made any difference in how he/she was treated in school. Almost two-thirds of these responses were an unqualified "no." Seventy-five percent of the Advanced Diploma students did not believe that there were any differences, while 65% of the General Diploma students did not believe that there were any differences. A few students elaborated:

> No. There is no difference because most people don't even know what you're taking so they treat you normally.
>
> No, not really, unless you're in Class X. Then everyone thinks you're a retard, probably because most of them are.
>
> No, it doesn't matter what diploma a student is enrolled in. It makes no difference how they're treated usually, except for some students who dislike "smarter" people or some teachers who favor "smarter" students.

Fewer than one-quarter of students responded in the affirmative to this question. Their explanations centered on two concerns: peer perception or teacher expectations. Some students felt that the diploma pattern they chose created pressure from their peers:

> Sometimes peers and peer pressure can give you a hard time about it.
>
> Yes. I am known as a "geek" or "nerd" because of the courses I take. I have no spares and I go to the library.
>
> Yes, when you aim for just a General Diploma, the other students in an Advanced Diploma try to put you down in saying you're stupid, not smart enough. Then that leads into other discrimination. The whole thing is stupid.

Imaging or labeling was the primary concern of students with respect to how they were seen by their peers and, while the practice may be judged to be undesirable, it is a common method by which students acknowledge the existence of individual differences among themselves. Other students, most of whom were enrolled in the general program, experienced differential treatment based on expectations for them:

> Yes, definitely. If you're in an honors class you are treated differently because they know you're willing to work harder. I think [it] has some positive and negative aspects.

> Maybe, by the teachers.
>
> Usually, the advanced people get more privileges because they can afford to miss a class or two.
>
> I think that there is a bit more flexibility for Advanced Diploma students.
>
> If you are enrolled in an advanced, teachers treat you better. If you enroll in general, people think you're stupid and the teachers are harder on you.

A similar number of students (22%) believed that only one diploma was needed for high school graduates. Most students recognized that the need for two diplomas was based on differing student abilities. Comments such as, "different people have different needs," "not everybody can attain the marks for an Advanced Diploma, so there must be a back-up for them," and "two types of diplomas give different challenge levels for different students" illustrate why students supported the dual system. Only a few students favoring a single diploma commented, and their comments reflected equality issues. The following comment is representative: "I think one diploma is a good idea so there isn't any separation of students (smart, dumb)." In support of a single diploma, one student was bold enough to suggest that there was a relationship between school dropouts and the dual diploma system. Despite a few dissensions, most students supported the two-diploma system.

The opinions of students, their parents, guardians, and teachers regarding the two-diploma structure are compared in Table 19. Students expressed the least preference for the two-diploma structure while their parents and guardians showed the highest preference for the dual diploma structure. It is not clear whether those students who believed that there was differential treatment for students based on the diploma program they were enrolled in are the same students who expressed preference for a single graduation diploma.

Just over half of the students (59%) expressed a positive feeling about the number of compulsory courses, but opinions were varied as is shown by some typical responses:

> I think they are equally divided, but when you want an Advanced Diploma, you just don't have much space in your timetable for option courses you'd like to take.
>
> I think people are pushed too much into all work and no play. Too much emphasis on math, English, social, and science.

> It is good to have a couple of options to take a break from the harder courses but I feel they are not as important.
>
> I feel it is good we have more compulsory courses because they teach you a lot of the things you need to survive in the future. Options like drama are fun, but may not get you a job.
>
> I think there is a healthy balance in the high school program because you can have your compulsory courses and have some fun courses too.

Only a slight majority of students (53%) felt there was a positive relationship between the number of compulsory credits in their programs and the quality of their high school education.

Table 19

Opinions on the Dual Diploma Structure

| | Favor two diploma | Prefer one diploma | Undecided |
|---|---|---|---|
| Students | 63% | 22% | 16% |
| Parents or Guardians | 82% | 7% | 11% |
| Teachers | 79% | 12% | 9% |

The overall reaction of students to the new graduation requirements was rated to be very good (17%) or generally okay (56%). Eighteen percent of students felt that the requirements could be improved with a little change, and only 6% of students felt they needed a lot of change. The primary concern students expressed about the requirements related to the lack of opportunity to select courses of their choice, and a lack of understanding about the differing requirements. One Advanced Diploma student was quite explicit in expressing his opinion:

> Are we not smart enough to decide what we need since college does not look at the diploma but at the marks regarding the applicable courses? Are we trying to compete with the Japanese system of education?

While about 31% of students expressed concern with the new diploma requirements, the majority of students (69%) indicated that they had no problems or concerns.

## Discussion of Students' Perceptions of the New Graduation Requirements

The students of Meadowview High School demonstrated that they had formed definite perceptions about the new graduation requirements. They were sensitive to the differentiated performance and achievement expectations of the dual diploma structure. Students were aware of individual differences among themselves, and the majority of students accepted the differential expectations as a means of addressing these differences. A minority of students expressed concern about the discriminatory effects of the differing standards. Generally, students accepted the new graduation requirements passively as something that was determined elsewhere and was beyond their control. While a few students were critical of the government for "doing this to them," most believed the student role in the implementation process to be one of accepting subordinates.

The expectations of teachers are known to influence students' expectations for themselves, and subsequently, their behavior with respect to performance and achievement (Rutter, Maugham, Mortimore, Ouston, & Smith, 1979). The expectations of the new graduation requirements seemed to be having a similar effect on most students at Meadowview. The stress of higher expectations had motivated many students to meet the new expectations. However, for a smaller group of students, the higher expectations seemed to be resented, and are likely to affect their commitment to school.

Much of the literature related to school improvement and school effectiveness suggests that focus on academic subjects and student attitudes toward getting good grades is an important factor in student success. In general, Meadowview students seemed to support the emphasis on academic pursuits and were likely to both accept the challenges and meet them. For the smaller groups who had not accepted these changes, questions arise with respect to their ability to function in an organization whose values conflict with their own. Are they the future dropouts?

Fullan and Stiegelbauer (1991) cite several research studies that show that the factors that influence the specific problems of school dropouts are the same as those that have been found to relate to school improvements and school effectiveness. Emphasis on academic pursuits in a positive orderly school climate with less differentiation of curriculum for different groups has been identified as a key factor in facilitating success for students. The new graduation requirements in Alberta increased the academic rigor, but contrary to the findings and recommendations of the effective schools and at-risk student research, they have increased differentiation by introducing new curricular streams rather than reducing it.

Those students who had accepted the expectations of the education system and were willing to conform to those expectations did not question the imposition of the new graduation requirements. On the other hand, those who did not "fit" into the system and were unwilling to change to fit into it were not likely to accept the new requirements and may have difficulty completing the requirements for their diplomas.

## Chapter Summary and Discussion of Results

Through a series of encounters extending over a three-month period with Meadowview School administrators, teachers, and students, the researcher used various means to collect data relating to the implementation of the new graduation requirements at their school. The data were then analyzed according to procedures described in Chapter 3, and the results were reported earlier in this chapter according to the information source: principal, teachers, parents, and students.

The various school-based stakeholders in this study understood their roles in the implementation of the new graduation requirements as those of subordinates in the top-down model of policy implementation. The new requirements were seen as a set of instructions and directions prescribed by Alberta Education. In the case of the school principal, compliance was not passive, but rather actively integrated with what he believed to be in the best interest of the Meadowview students. However, teachers, parents, and students passively accepted the reality of the situation and complied with the new requirements by fitting them into their own priorities.

Bosetti (1990) concluded that curricular change is a process that requires both time and patience. She went on to state that

> Teachers and administrators require a realistic amount of time to learn about the mandated change and how the implementation will affect their roles and responsibilities. Time permits the building of a commitment to implementation, whereas pressure can result in mere acquiescence to the mandate. (p. 194)

Although the proposal for changing the new graduation requirements was released by Alberta Education in June of 1987 and the new graduation requirements were finalized in February of 1988 with implementation scheduled for September of 1988, it is likely that there was insufficient time for administrators and teachers to build a commitment to the new requirements. Furthermore, there was no specific plan to inservice teachers about the changes. The findings of this study indicate that administrators, teachers, and students were pressured into acquiescing to the new requirements and that they were passively complying with the new regulations. In accepting the top-down strategy of policy implementation used by Alberta Education, administrators and teachers accepted their inability to provide meaningful input to the policy development. Bosetti (1990) also found that lack of communication and information between Alberta Education and school personnel created suspicion about the validity of the findings of the Secondary Education Review. As a result, the subsequent interpretation and translation of the review into the government's policy statement, *Secondary Education in Alberta* (Government of Alberta, June 1985), lacked credibility.

A significant example of Alberta Education's lack of understanding of the need to plan and communicate policy relates to the implementation time line. High schools begin counselling grade 9 students and assisting them with their high school registration in February, March, and April of each school year. This was about the same time as the new graduation requirements were announced, with implementation scheduled for September of the same year. There was literally no lead time for inservicing teachers and counsellors, either to build commitment to the changes or to ensure understanding of the changes to assist staff in advising students. Yet, these were Alberta Education's expectations for the high schools. The short period of time between the finalization of the new graduation requirements and the mandate for their implementation--six months--contributed to the fact that teachers were in the earliest stages of concern about the requirements, and parents were generally unaware of changes.

In the present study at Meadowview High School, a sense of apathy in terms of influencing Alberta Education was detected. For example, the principal and the staff of his previous high school attempted to provide meaningful input to Alberta Education regarding the core/complementary course balance. The concerns were by and large ignored and eventually the principal came to accept "whatever" was imposed in the way of graduation requirements. For the teachers, the new graduation requirements became just one more thing to cope with in carrying out their ongoing responsibilities. Most teachers seemed conditioned to accept whatever was imposed and were oblivious to those aspects of the mandate that did not affect them directly. The parents who, for the most part, were unaware of the new graduation requirements entrusted Alberta Education to set the standards. The students who were forced to meet the new standards seem to have been left out of the policy process entirely. They did not have an opportunity for input and did not see opportunities for feedback, except perhaps through this study. Implementation at the school level occurred because it was an official mandate from Alberta Education and not so much from a sense of commitment to the goals of the new graduation requirements.

Fullan and Stiegelbauer state that educational change may fail partly because of assumptions made by the planners and partly because some problems are "inherently unsolvable" (1991, p. 94). While the implementation of the new graduation requirements at Meadowview High School is proceeding according to the decree, a lack of commitment pervades the implementation. Wise (1977) suggests that policy makers are frequently *hyperrational* [his italics] with respect to their commitment to what *should be changed* [his italics] and this often acts as a barrier to establishing an effective process of change. Fullan and Stiegelbauer (1991) comment that

> a certain amount of vision is required to provide clarity and energy for promoting specific changes, but vision by itself may get in the way if it results in impatience, failure to listen, etc. Stated in a more balanced way, promoters of change need to be committed and skilled in the *change process* as well as in the change itself (p. 95).

Fullan and Stiegelbauer further emphasize that "educational change is coming to grips with the multiple realities of people who are the main participants in implementing change" (p. 95). In this study, it appears that Alberta Education has imposed its own reality vis-à-vis the new graduation requirements, upon the school-based stakeholders without identifying and confronting the situational constraints faced by the potential implementers.

Wise (1988) further argues that even if goals were clearly stated, the means of implementation were set out, and evaluation procedures identified, they would "not have much of an impact, because schools, like any social organization, do not operate in a rational vacuum" (p. 45). Meadowview High School is a large, complex organization with multiple goals, multiple decision makers, and a variety of successful and appropriate program delivery strategies. Failure to consider the multiple realities of the key actors in the implementation process resulted in a weak commitment to the new graduation requirements on the part of school-based stakeholders, and this deficiency is likely to create future problems.

# CHAPTER 6

# THE SCHOOL DISTRICT'S PERCEPTION OF THE CHANGE

After the school itself, the school district is the second most influential social setting affecting change. The local school district "represents one major set of situational constraints or opportunities for effective change" (Fullan, 1982, p. 63). Louis described the relationship between urban high schools and their district offices as being like bad marriages, rarely uniformly positive or negative, with no possibility of divorce, and limited opportunities for positive mutual influence (1989). Several researchers have identified criteria for analyzing the effectiveness of school districts with respect to implementing meaningful change. Fullan (1982) identified six factors relative to implementation success in the school district: the history of innovative attempts, the adoption process, central administrative support and involvement, staff development approaches, the time line and information system, and board/community characteristics (p. 63). Other researchers have found that the relationship between the school and the district has a direct bearing on implementation success. Louis and Miles (1990) characterize the quality of school-district relationships as having two separate dimensions: the degree of involvement, termed *engagement*, and the level of control through rules and regulations, termed *bureaucratization*. When innovations resulted in successful school improvement projects, the relationship between schools and the district was characterized by high engagement and low bureaucratization. Other combinations of degrees of engagement and level of bureaucratization were found to limit implementation success. The findings of a study of the "district ethos" of school districts in British Columbia by LaRocque and Coleman (1989) also determined that the ongoing interaction between schools and the district affected implementation. They concluded that

> high performing school districts are characterized by a senior administration very much involved in holding school administrators accountable for quality, while at the same time leaving responsibility and authority for the types and methodologies of change at the level of the school. (p. 190)

Generally, research shows that the role of the school district in implementation is primarily one of supporting schools in their change efforts.

For the purposes of this study and in keeping with the ethics guidelines adopted for this research, the pseudonym, River City School District, will be used to identify the school jurisdiction. The data for this chapter were collected through semi-structured interviews with the School Board chairperson, two senior school district administrators, and five district consultants in January and February of 1990. The interview questions were developed using the convergent questions technique of the Levels of Use (LoU) procedures developed by Loucks, Newlove, and Hall (1975). In this technique, the researcher asked categorical questions about each LoU category pertaining to the interviewee's use of the new graduation requirements and then probed the response to acquire in-depth information about that LoU category. Copies of the covering and verification letters, consent form, and interview questions are found in Appendix A. District documents including the position paper on secondary education and reaction papers to the secondary education policy and the new graduation requirements were a complementary source of data.

The data were analyzed according to Fullan's *six district factors affecting successful implementation* of an innovation (1982, p. 56). The researcher was also sensitive to the relationship between the district and the school in terms of the implementation of the new graduation requirements, and relevant data are introduced as appropriate. The chapter begins with a brief description of the school district and continues with the presentation of data according to the district factors affecting implementation. A summary of the findings and discussion of results follow.

## The School District

River City School District serves a large metropolitan area of a major city in Alberta. In 1989-90, almost 75,000 students were educated by over 4,000 certificated staff supported by 2,000 clerical, maintenance, and custodial staff in about 200 schools (River City School District Fact Sheet, 1989-90). The district prides itself on the variety of program choices offered to meet the individual needs of students and the educational expectations of parents. The 1989-90 operating budget was in excess of $350,000,000 with the primary revenue generated from the traditional Alberta sources, the provincial government's School Foundation Program and local property taxes.

The district is governed by a board of nine trustees elected every three years through public balloting during the civic election. The chief executive officer of the school district, the Superintendent of Schools, is appointed by the Board of Trustees and is responsible for the administration of education in the district. Through his leadership, the district has gained recognition throughout North America for their innovative approaches to education, particularly in the area of budget decentralization. The school district is divided into seven areas, each of which is managed by an associate superintendent who is responsible to the Superintendent of Schools. Additional support services are provided through a number of departments including Consulting Services, Student Services, Curriculum Services, and Budget and Accounting Services.

## Fullan's District Implementation Factors

District administrators are a powerful determining factor in whether a change is successfully implemented. If they take the change seriously, it stands a chance of succeeding. Fullan and Stiegelbauer assert that the "crunch" (1991, p. 198) comes forcefully at the implementation stage. Without specific implementation pressure and support, adopted changes will not result in desired effects unless district staff takes a leadership role that extends beyond offering general verbal support. The following section focuses first on the process leading up to the school district's adoption of the new graduation requirements, and then on the support offered by the district to its high schools regarding the implementation of the new graduation requirements and the perceptions of the Meadowview High School faculty of that support.

### The District's History of Innovative Attempts

This factor can be described as the history or record of success or failure districts have experienced in implementing various changes. Fullan's underlying message is that people carry meanings from one experience to the next, which establishes a mental set or attitude towards changes that will determine the implementer's disposition to prospective changes (1982). Stated another way, the responses of individuals and groups to a particular innovation is best understood and predicted when their past histories vis-à-vis change and innovation are known. In this study, none of the interview questions specifically inquired about the history of innovative attempts in the school district, and none of the district interviewees raised previous experiences as a related issue.

However, by reputation, the River City School District is known for many activities directed at achieving the best possible education for all students and for its talented and dedicated staff "who provide innovative programming in modern classrooms" (River City Schools, 1988-89, p. 2). The chairperson affirmed the district's perception of itself: "this district is a leader." It appeared that the school district had been involved in various innovative ventures in the past, although the data collected in this study did not provide any specific evidence of the district's record of success in implementing change. Therefore, this study cannot determine the effect of the district's previous implementation experiences on the implementation of the new graduation requirements.

### The Adoption Process

For the purpose of this study, the adoption process has been defined as beginning with the school district's involvement with the evolution of the secondary education policy and the new graduation requirements and continuing through the various policy adaptations.

The school district, like many other stakeholders throughout the province, was actively involved in the development of the *Secondary Education in Alberta* (Government of Alberta, 1985) policy. When the Minister of Education established an advisory committee to review secondary education in Alberta in 1984 (Bosetti, 1986), the School Board participated in the policy formulation process by preparing a brief outlining its vision for secondary education in Alberta (River City Schools, 1984). The district welcomed the opportunity to provide input to the development of the new policy because it expected that its beliefs would be reflected in the policy statement. Although 19 recommendations were presented in the brief, the district drew particular attention to the need to address three key issues:

* the definition of both the content and structure of basic education

> * the need for curricula that are well articulated from kindergarten through grade 12 and
>
> * an educational structure that permits student progress on a continuous basis. (p. 2)

First, the brief anticipated that implementation of the recommendations "would result in a paradigm shift of major proportions in Alberta's system of secondary education" (p. 2). Second, River City Schools envisioned a single core curriculum common to all students which would be articulated from kindergarten through grade 12, and that would permit student progress on a continuous basis. Student evaluation would be based on demonstrated knowledge and skills. It was acknowledged that achievement of this vision would "radically alter" (p. 2) the education system. The third aspect of the district's brief proposed a shift in the purpose of practical arts programs from the attempt to prepare students for direct entry into the work force to providing students with the opportunity to apply acquired knowledge. The district's brief concluded by urging the province to "make more than cosmetic changes to the existing system of secondary education" (p. 11). The brief clearly envisaged the need for major restructuring of the delivery of secondary education. The process of reviewing and reflecting on secondary education within the school district determined the district's vision for secondary education and also established the district's expectations for future developments.

In January 1985, Alberta Education released the report of the Advisory Committee, *Foundations for the Future*. This report was a compilation of province-wide briefs, extensive consultations, and research reviewing secondary education. The various stakeholders who provided input to the review process were invited to prepare a reaction response to the report. In March 1985, River City School District presented its reaction paper, which reconfirmed many of the recommendations made in its original brief. Through this brief, the School Board responded to the report of the advisory committee on secondary programs by expressing disappointment: "the document lacks both the vision and the excitement associated with learning" (p. 2). The School Board did not support the findings of the *Review of Secondary Programs* (Alberta Education, 1985) for three basic reasons. First, it felt that the review attempted to be "all things to all people"; second, the recommendations were based on a traditional view of education and failed to take any new or bold directions; and third, the report failed to give attention to the intrinsic values of education (p. 24). The School Board indicated further that "the maintenance model of change" was "clearly unacceptable" (p. 2) for setting the direction to better prepare young people to live in the world in the 21st century.

A set of nine recommendations reflecting the district's position related to the essential components for improved student learning were outlined in the submission. The recommendations covered a wide scope of issues including the basic principles of education, organizing for learning and teaching, curriculum, measures of achievement and development, standards of achievement and reporting, program delivery, organizing for learning, allocation of resources for implementation, and rights, roles, and responsibilities of stakeholders (pp. 3-5).

The development of the reaction paper by the district reiterated its expectations for the secondary education policy. Although the government's *Secondary Education in Alberta* (1985) policy statement acknowledged some of the concerns raised through the board's input, there was a perception on the part of the chairperson and the senior administrators interviewed that the district's vision for secondary education differed from the government's vision in several areas. Many of the issues identified by the district were not addressed in the policy statement, and the new policy was perceived to be an effort to intensify commitment to existing goals rather than to introduce changes aimed at restructuring education.

The district's third written brief to Alberta Education, dated October 1987, responded to *Proposed Directions for Senior High School Programs and Graduation Requirements* (Alberta Education, 1987a). Once again, the district expressed concern about Alberta Education's vision and the failure to address what it perceived to be the needs for secondary education in the province. The response was, in fact, generally negative towards the proposed policy.

From the outset, the district's vision was substantially different from that enunciated by Alberta Education. The district believed that substantial restructuring was required if secondary education was to meet the future needs of students, whereas Alberta Education seemed intent on intensifying efforts using the existing structures. In the preparation of its three position papers, the district clarified its vision of the new graduation requirements. Furthermore, these experiences intensified the district's commitment to its particular vision and established expectations that were to affect its commitment to the new graduation requirements and their implementation.

The next section will enlarge on the school district's vision for secondary education and the new graduation requirements by outlining first, issues in dispute, and second, areas of consensus.

The goals of secondary education. The primary area of disagreement involved the relationship and emphasis of core/academic subjects to complementary/options. School district officials were concerned about what they believed was too much emphasis on academic subjects. The School Board chairperson, for example, believed that "all students should receive a well-rounded education" and that "we shouldn't be just an exclusive education system for only those students who are pursuing academic interests, so that we need to provide courses that are going to challenge *all* students." Particular concern was expressed about academic and vocational programs because their focus was viewed as being restrictive. The chairperson stressed the importance of students having "relevant and current knowledge of technology, a scientific background, phys. ed., and all of those good things; and I think a well-rounded education has to include some components of fine arts."

A senior official voiced similar concerns. He advocated the maintenance of a liberal approach to education which would allow all students to have "a good grounding all the way across" many subject areas. Although he supported "a better grounding" in math, science, social, and English, he believed that "concentrating on those four areas is not total education--there is so much more." He went on to describe the benefits students could derive from studying the fine arts. An assistant superintendent reiterated the concern about the difficulty of fitting in options with the increased number of mandated courses and singled out fine arts as an area that would "suffer." The official went on to say that

> if you want to raise the standard of what students are getting, you raise the standard, you don't suddenly try to make them take more and more of something.

Overall, school district officials supported an increased requirement for academic subjects, but the general belief was that Alberta Education had become too restrictive in the new graduation requirements.

The Carnegie Unit. In Alberta, the Carnegie Unit is equal to 25 hours of study. Credits are awarded on the basis of successful completion of course content during units of time equated to the Carnegie Unit. For example, a three-credit course requires 75 hours of study, and a five-credit course requires 125 hours of study. River City School District expected the government to recognize that time spent on a subject was not necessarily an indication of mastery or success. The school district's position was that "credits for courses be granted on the basis of demonstrated knowledge and skills rather than on the basis of time spent" (River City School Board, 1985, p. 20).

The chairperson referred to the Carnegie unit as being "very restrictive" in that "achievement or success could not be equated to time." Furthermore, the chairperson believed that Alberta Education's failure to use the opportunity to provide educational leadership in this area resulted in restrictive and inflexible program delivery and organizational structures.

The associate superintendent explained his objections to the Carnegie unit by indicating that some students needed more than the 125 hours allocated for five-credit courses to master the content; and under the present system, "if a kid needs 175 [hours] to complete it, the only way they can do it is to take it for 125 hours, fail it, and do another 125 hours." The official lamented the senselessness of the situation and believed that awarding credits based on achievement would better meet the needs of individual students.

A senior district consultant believed that most schools liked the Carnegie unit as an organizational device not only because "it's well known, clean, and efficient," but also because "they have a difficult time imagining any other method of operation." Although there was acknowledgment that, in the secondary education review, Alberta Education had challenged educators to find an alternative to the Carnegie unit, he also thought that "the leadership should have come more from the province than just kind of throwing it at us."

The district's reaction to the proposed graduation requirements reiterated the concern regarding the "lack of vision" (River City School District, 1987, p. 5). The district was critical of Alberta Education's "exclusive reliance on the Carnegie Unit or time-based learning" (p. 5) and the lack of leadership or assistance in exploring alternatives.

Streaming. The school district was opposed to streaming on the basis of issues relating to equity and pedagogy. Recommendations in the Advisory Committee's review report which endorsed the concepts of streaming and multiple diploma structures were perceived by the River City School District (1985) to be hierarchical and inconsistent with the basic principle of common objectives and content for core subject areas. It was believed that

> specific diploma structures would reduce student flexibility and motivation for the selection of certain programs and courses. Students with a vocational, business, or fine arts interest may feel that the selection of a specific route denies them the opportunity to pursue an academic program or vice versa. (p. 18)

A senior consultant explained that the district was opposed to the streaming of social studies because it "felt the need for one curriculum that could then be modified to meet the needs of interested students." The assistant superintendent echoed the concern about streaming by stating that streaming "would separate students out." On the other hand, it was acknowledged that some teachers favored streaming because it enabled them to adapt programs according to student ability. The district's original position on streaming was modified slightly when the district reacted to the *Proposed Directions for Senior High School Programs and Graduation Requirements* (Alberta Education, 1987a). Its position on streaming, especially in social studies, had softened; the district indicated that there was a lack of consensus on the second programming stream in social studies.

Areas of consensus. The school district and Alberta Education were in agreement on several components of the new graduation requirements (River City School District, 1987):

* increased credit requirement for social studies
* increase in the passing grade from 40% to 50%
* incomplete standing
* retroactive credits
* expectation that technology will be a part of every course
* increased demand for use of laboratory facilities
* new learning resources
* increased professional development for teachers. (p. 3)

The last four items were received positively, but the board expressed concern about their financial implications. With the increased number of prescribed courses for the General Diploma, the board projected a decreased enrollment in vocational education, business education, and fine arts courses. The board predicted that this would necessitate increased costs related to the redeployment and retraining of teachers and renovations to existing facilities. The CALM course continued to enjoy the support of the board; however, the question of mandating it as a required course for all students, especially Advanced Diploma students, was raised.

The school district's historical perspective regarding the new graduation requirements. The school district did not believe that the recommendations made in the secondary education review reflected "the paradigm shift in educational thinking anticipated by the board" and, furthermore, did not "invite a rethinking of the fundamental purposes of education" (River City School District, 1985, p. 6). The district believed that educational endeavors should focus on maximizing each student's opportunities for learning and development. The different visions enunciated by the school district and Alberta Education, regarding the secondary education policy and the new graduation requirements, represent a significant precondition that affected the district's commitment to the 1988 graduation requirements and had implications for the ensuing implementation.

In spite of the differences of opinion regarding the new requirements, River City School District began to implement the new regulations as required in the fall of 1988. An associate superintendent with the district indicated that the district has "no option but to follow the new diploma requirements; it's what the kids have to have in order to acquire the diplomas. We are here to serve the kids and we have to do that." One consultant explained the situation this way:

> the board didn't really support the concept of two streams [in social studies]; however, once the two streams were introduced, you know there is a mandate after all from the province and what we then try to do is, even though sometimes we don't always agree with things, we do try to be as proficient and effective and so on as we possibly can.

The school district was following the regulations as required. However, there was not much enthusiasm for or commitment to implementing a policy that did not fulfill the expectations of the senior district administrators, and they continued to interact with Alberta Education in an attempt to redefine the graduation requirements. On one hand, at the implementation level, the district became a passive consumer of new requirements; on the other hand, at a developmental level, it continued to lobby for changes that it believed were in the best interests of its students.

While Fullan acknowledges that "participation in adoption decisions and development is not necessarily related to effective implementation," if the decision to change has been carefully considered with appropriate commitment and follow-through by the district, implementation is much more likely to be taken seriously by principals and teachers" (1982, p. 64). Fullan further suggests that participatory planning can be harmful if it involves disagreement that is not resolved in the policy formulation process. In this study, the River City School District and Alberta Education had differing opinions regarding several components of the secondary education policy and the new graduation requirements that were unresolved. Furthermore, the quality of Alberta Education's planning process leading up to the adoption of the new graduation requirements was not perceived by school district officials as effectively reflecting the district's vision for the new standards, and this in turn affected the district's commitment to the implementation. The River City School District went through the motions of implementation without much advocacy for the change. The result was a lack of commitment to making the change a reality.

### District Administrative Support

Fullan suggests that the support of central administrators is critical for change in district practice, particularly when the adoption decisions are bureaucratically oriented. Limited implementation occurs when "senior management does not make serious follow-through attempts to provide resources, training, etc." (1982, p. 64). Furthermore, teachers and principals expect central office administrators to "demonstrate through actions" (p. 65) that they support the change.

The role of the superintendent in the change process focuses primarily on initiating, supporting, and maintaining a vision of the change as opposed to becoming actively involved in its implementation (Louis, 1989). Louis states that the superintendent plays a leadership role through the setting of policy and long-term directions and leaves the day-to-day management of change to others. The superintendent of the River City School District supported the district's position paper on the secondary education review, the reaction papers on the secondary education policy, and the new graduation requirements by initiating their development and sponsoring their presentation to the School Board. The data did not provide any specific evidence of the superintendent's active involvement in the establishment of the district's position as expressed through the position or reaction papers. Louis (1989) supports this finding. She indicates that

> superintendents are like chief executive officers in other large organizations: they are distracted by public appearances, political crises, broad personnel questions, and the need to deal with a more dynamic range of constituencies. (p. 162)

While the superintendent of River City Schools was not a key or frequent actor in the development of the new graduation requirements, he played the traditional symbolic role in the evolution of the district's position regarding the changes.

Support demonstrated by other school district administrators towards the new graduation requirements was mixed. It ranged from a newly appointed consultant who admitted that she was unfamiliar with the new requirements and did not know "why this was being done or why it was modified" to a senior consultant who was involved in drafting the school district's submissions to Alberta Education. The data show that the role assumed by most of the consultants was to support their particular subject areas by offering inservice programs designed to update teachers and keep them informed of the curricular changes associated with the programs required for the new graduation requirements.

The role of the senior administrators tended to be less specific. The interview data indicate that they were very knowledgeable about the new requirements and offered leadership and encouragement to central office personnel and school-based administrators on an individual and ad hoc basis. There was no evidence of a district-wide implementation plan. Each high school had the authority to implement the new graduation requirements according to its own best interests.

Impact of decentralization. The decentralized organizational structure of the River City School District empowered school-based administrators to make decisions especially related to budget allocations pertaining to the operation of their schools, and reduced the level of district-to-school rules and controls. A senior consultant pointed out that River City was a decentralized school district, and "a lot of decision-making about how programs are implemented are really school issues." Another consultant suggested that program delivery decisions were school based, and "they [the schools] have to decide how they can set up their programs to facilitate the changes." The same consultant indicated that her role was to introduce the changes to subject area department heads and encourage them to plan for the new programs. The overall effect of decentralization is a lower level of bureaucratization, one of two factors that Louis and Miles (1990) identified as being essential for successful implementation.

Board/administrator/consultant communication. Within the district office there was evidence of good intra-office communication. The district consultants perceived that the School Board was knowledgeable about new graduation requirements and supportive of consultants' concerns about the changes. The CALM consultant, for example, believed that, in spite of the many controversial issues pervading the CALM course, that "by and large, that I am supported [by the board and senior administrators] and that the curriculum is very much OK." The math consultant expressed amazement at the Board's awareness of educational matters and its willingness to "access the people that are aware and get briefs and updates" on emerging issues. The consultant indicated that "we are always being asked to provide information on various things, and every time there is a Board meeting, questions come up." Overall, satisfaction was expressed "with the flow of communication." Senior administrators echoed a similar perspective. An assistant superintendent indicated that formal and informal discussions about the new graduation requirements and the implications of their implementation had taken place at all levels--consultants, senior staff, trustees.

Support for consultant and teacher concerns. Communication between district consultants and schools tended to focus on subject area relationships. For example, the math consultant interacted with the math department heads primarily, and to a lesser degree with math teachers. Most consultants met regularly with the department heads to discuss matters of mutual concern, and the specific program implementation pertaining to their subject specialization had been discussed from time to time. This process brought concerns out in the open and provided opportunities for sharing perceptions, mounting lobbies, and coping with problems. One consultant's assessment described the reality of teachers' perceptions of implementing new programs:

> You hear both sides, and if you didn't, then you would know that something was wrong, that they weren't telling the truth. I don't think there is ever a change in anything that there's not complaints. That's a natural part of the process, right? Change is very upsetting and some people would like never to change.

The school district had an established process to handle serious concerns about program changes. One consultant described it as follows:

> If I have all sorts of concerns about the program, I work through my supervisors and through the associates. That information is eventually conveyed to Alberta Education.

The science program was a case in point. The consultant working with the science department heads in the district met with various officials from Alberta Education to advocate that grade 11 science courses be offered for five credits rather than three credits. The consultant believed that "there was good communication, and I don't think Alberta Ed was left with much doubt as to where our concerns really were." The concerns were also drawn to the attention of senior administrators and the trustees. The School Board formalized the concerns of the science specialists with a letter to Alberta Education. Science teachers interpreted the School Board's action as support for their position on the credit value of the science courses. The chairperson believed "that science is probably an example of where I believe Alberta Education did listen," although it was acknowledged that the River City School District was only one of many stakeholder groups to express concern about the science program.

School-level perceptions regarding district support. Personnel at Meadowview High School had various perceptions of the type of support they received from their district office regarding the implementation of the new graduation requirements. They ranged from the feeling of "no support" through to a feeling of meaningful support.

An assistant principal indicated that he had not had very many opportunities to share ideas and express concerns with district office administrators. He added that "basically we depend on the information that comes from Alberta Ed and some from our system, and you just have to read it." A department head at Meadowview High School indicated that within the school there was absolute and total support for program implementation, including timetabling and textbook and equipment purchases, but

> beyond the school, we don't have that much to do with our central office in terms of the way that we are set up. Most decisions on this are made within the school.

He went on to say that any complaints could be made directly to the district consultant and would subsequently be addressed at district-wide meetings of the subject department heads. The specific example he cited related to concerns about the science program which were identified by science teachers at the school and brought forward to the district administrators, the board, and eventually to Alberta Education.

One department head expressed the opposite opinion regarding support from central office decision makers regarding the changes. He indicated, "There is none, I mean, what support?" He went on to say the he hadn't "the slightest idea what the trustees or anyone else for that matter, think on this matter. I mean, the only people I am really aware of, are what my teachers think." Responses from members of the Meadowview faculty range from those who believed that district office personnel demonstrated support of implementation efforts to those who did not perceive any support from the district office personnel.

The district consultants perceived of themselves as being available to serve the schools, while the schools didn't always see or feel the need for assistance. One consultant summarized her experiences in this way:

> I went around and spoke to virtually every [high school] principal in this district about, you know, could I help them? Was there anything that they needed? Mostly they didn't need anything, but I did, I think, have them realize that there was a new program right there in front of them and that they should do some work on it.

On balance, it appeared that the level of involvement between the school district and its high schools was relatively low. Louis and Miles (1990, p. 178) suggest that, when the level of involvement or *engagement* is low, the success of implementation is reduced. In the River City School District, decentralization which had the potential to contribute to the positive effects of a low level of bureaucratization, may also have limited the level of engagement between the district office and its schools which was needed to support successful implementation.

Extension of student time in high school. The school district was concerned about a student's ability to complete the more rigorous graduation requirements within the usual three-year time period. The basic concern was about the additional commitments needed to finance the additional time many students were spending in school. The chairperson indicated that "Alberta Education isn't picking up *all* the costs of funding these students; the local taxpayer is picking up more and more of those costs." An assistant superintendent suggested that "if we allow kids to stay in school longer, there is less money for the kids who are staying in school now. The pot is only so big; it doesn't ever get any larger."

Facilities were another concern related to students extending their high school education beyond three years. The chairperson projected that with students remaining in school another year there would be additional pressure on facilities. The associate superintendent indicated that some schools, unlike Meadowview High School, were already full, "busting at the seams," and the district was having a "space problem right now because of the returning grade 12 students." He also expressed concern about the shift in facility requirements. With less need for vocational labs and greater need for science labs, additional monies would be required for renovations.

The district was also concerned about the shift in the need for teachers with specific expertise. With the increased requirements for science credits, school administrators projected the need for about 30 additional science teachers and a corresponding drop in the number of teachers required to teach optional subjects (*School Notes*, 1990).

Fullan states (1982) that the quality of the implementation is affected to the extent that administrators understand and help to manage the set of factors and processes that affect implementation. The difference of opinion between the district and Alberta Education about the new graduation requirements may have prevented the development of the district's commitment to the mandated changes that, together with the district's decentralization policy, contributed to the low level of engagement between the district office personnel and school personnel. The issue of multiple realities also enters this discussion. District office personnel perceive themselves to be supportive and helpful, whereas most school personnel feel only limited district involvement in the operation of their school.

## Staff Development and Participation

If the essence of educational change consists of learning new ways of thinking and doing, and new skills, knowledge, and attitudes, then "staff development is one of the most important factors leading to change in practice" (Fullan, 1982, p. 66). He goes on to advocate inservice training programs that provide the ongoing, interactive, cumulative learning that will enable staff to develop new conceptions, skills, and behavior. Support at the early stages of the implementation is critical to assimilating the changes into practice. The River City School District makes a variety of professional development activities available to teaching staff. These include professional development programs for sabbatical and professional leaves of long- and short-term duration, in-school and after-school inservice programs, and consultation services on an individual or small group basis.

District inservice programs. All of the consultants interviewed in this study indicated an involvement in inservice programs. However, not all of the consultants offered programs specifically related to new or revised courses mandated by the new graduation requirements. Furthermore, the inservices focused primarily on curricular changes and new teaching strategies and not specifically how the changes related to the new graduation requirements. A further characteristic about the inservices is that they were usually available to teachers on a voluntary basis, either after school or during the summer holidays.

The CALM consultant described a very successful inservice program designed to prepare teachers in the district to teach the new course. Much of the success of the program was attributed to the support, involvement, and participation of senior administrators in the planning and delivery of the inservice program. Teachers who had participated successfully in piloting the program acted as workshop resource persons by sharing their strategies and teaching resources. The use of "expert" teachers as teacher-leaders was found to be a successful plan for gaining commitment from inservice participants. This finding is supported by Lortie's (1975) research in which teachers said that they learn best from other teachers.

The science consultant also used "expert" teachers to lead inservices for other teachers. The "expert" teachers had been involved in pilot testing the new Science 14, and their experiences formed the basis of the inservice.

Unfortunately, Alberta Education had not yet completed the supplementary resource materials for the course, and this limited the success of the inservice program. The Meadowview department head, for example, suggested that "they [Alberta Education] blew that one really badly." He went on to indicate that teachers expect a lot of support including a good textbook, activity suggestions, additional exercises and worksheets, and evaluation strategies to implement the new program, and that Alberta Education had failed to provide this backup support. Science teachers were somewhat frustrated by having to implement the new Science 14 program without all the necessary materials.

Although the social studies consultant organized inservices for the 13, 23, and 33 stream of social studies courses, he pointed out that "inservices don't totally prepare you for the experience of being in front of students." The social studies department head at Meadowview High School found the inservices to be "ludicrous" because the inservices were being offered before the piloting and subsequent revisions to the courses had been completed. He believed that Alberta Education had pushed implementation of the 13, 23, and 33 social studies course before "proper piloting and revision work" in order to meet its own implementation schedule. The result was that the Meadowview social studies teachers did not have confidence in the new program and were frustrated by having to make a commitment to changes that had not yet proved themselves.

Perceptions of inservice support varied considerably between the school and the district level. While most teachers acknowledged that district consultants had organized inservices relating to the new program, one department head maintained that there had not been any inservicing in his subject area. At the same time, the consultant in that subject area explained in some detail the nature of the inservice program and its articulation with the new curriculum. The consultant admitted that teacher attendance at the after-school inservices was "not really very good" and could not offer a specific explanation regarding the poor attendance. For this subject, there appeared to be a communication gap between the consultant and the subject area teachers that led to different understandings of the inservice activities. This study did not determine the reason(s) why teachers failed to realize that inservicing was being provided.

Department head meetings. Each of the consultants, except one, held regular or semi-regular meetings with the department heads in their subject area. The goal of these meetings was to provide opportunities to share information, assess needs, identify potential inservice leaders, and organize and publicize the inservices. One department head suggested that these meetings provided

> our biggest line of communication, to tell each other what's going on. We'll even talk about certain topics and where students have a lot of difficulties and we'll come back and relate that to our own department. It makes us feel a lot more comfortable knowing that other schools are having the same problems we are and probably in the same areas. Or they are having as much success, or share these ideas. You know, hey, try it, it really worked well with us. Somebody else will say, forget about it, it didn't work, you'll waste your time on it. Sure, that's [department head meetings] our line of communication.

Both the consultants and the department heads viewed the interchange provided through department head meetings as being a beneficial process.

Sabbaticals. The school district, in recognition of the probable decrease in the need for vocational education teachers, had given priority to granting sabbatical leaves to vocational education teachers for the purpose of retraining in another subject field. The vocational education department head at Meadowview High School indicated that he knew of teachers who were taking advantage of this opportunity and had been retrained to teach French and elementary education. The associate superintendent supported the concept of sabbatical leaves, but he also indicated that

> professional development of professional teachers is their responsibility unless the district may help, and we are making sabbaticals a priority, but the major emphasis has got to be with the professional. We offer numerous inservices in this district where you could, if you take the time to go, do a pretty good job of getting yourself into another subject area. I think we can assist some people in some way, but I don't think it is solely the responsibility of the district.

The nature of most of the school district's inservice programs was pre-implementation staff development for teachers who would be teaching the new courses. There was some evidence of inservice programs during the initial stages of implementation when teachers are likely to have the most specific concerns and doubts. Support for teachers during the early stages came primarily from interaction of the department heads and teachers within the subject department at the school level. One department head suggested that "we haven't really done any inservicing yet, except I suppose our inservicing goes along when we drink our coffee." Although individual teachers who asked for assistance would receive support, according to one consultant, there was very little evidence of concerted district support for individual teachers trying to implement new courses. This may be attributable to the nature of high school departments, the district's decentralization policy, and the role responsibilities of the district consultants and administrators. Fullan maintains that successful training approaches to implementation combine "concrete teacher-specific training activities, ongoing continuous assistance and support during the process of implementation, and regular meetings with peers and others" (1982, p. 67). In the case of implementing new courses associated with the new graduation requirements at Meadowview High School, the provision of teacher-specific training activities was facilitated primarily through the district consultants, with the responsibility for ongoing support and interaction with peers a function of the individual school departments.

Teacher decision making. Teacher participation in the decisions affecting implementation was primarily school based, and it varied from department to department. In the math department, the department head indicated to teachers that each teacher could determine which of the new math textbooks he/she wanted to use. Teachers were encouraged to study the selections identified by Alberta Education as basic resources and then choose one. The result was that up to three different textbooks were being used by different teachers to teach the same course. According to the department head, the teachers appreciated the freedom to choose because, "this made everyone happy." In other departments, the teachers assigned to teach specific courses made decisions as a group. In the CALM course, for example, the teachers decided on a common textbook, some common assignments for all students with some flexibility for individual teachers and classes. Teacher participation in decision making about the specifics of the implementation is an indication of the development of subjective meaning relative to the change (Fullan, 1982). The decentralized structure of the River City School District enabled teachers to become involved in making implementation decisions. However, the degree to which individual teachers chose to become involved varied considerably according to their personal commitment to the new or revised programs.

Time Line and Information Systems (Evaluation)

The district did not have any specific formal evaluation plans in place. The chairperson indicated that it probably would be done because the district monitored students closely. One consultant believed that evaluation was something "that we've got to do fairly soon, but at this point that has not been done." Another consultant suggested that the formal evaluation of the new graduation requirements and the program changes would be carried out by a department within the school district with the specific responsibility for assessment.

Several consultants gave indications of informal monitoring experiences. One consultant suggested that the monthly meetings with department heads "gives us a quasi, informal way of monitoring implementation and general kinds of attitudes towards that particular subject area." He added principals did the same type of thing when they reported to their associate superintendents. Another consultant encouraged her department heads to monitor teacher responses to curricula, teaching strategies, textbooks, student responses, and so on. At the school level, evaluation was a strong term that elicited an "it's not my job" response. On the other hand, monitoring, gathering information about how things were going, was an ongoing responsibility that department heads accepted and tried to respond to. It could be argued that the science department head/consultant lobby was, in fact, a reaction to informal monitoring among the group that attempted to adjust or redefine the innovation to better meet perceived needs.

The key factor in establishing district/school relationships begins with communication. Fullan and Stiegelbauer (1991) stress that the

> effective district administrator is one who constantly works at communication, not because he or she thinks that people are resistant or dense, but because he or she realizes that difficulties of communication are natural and inevitable. (p. 199)

Furthermore, they indicate that it is the district administrators who set the pace and tone of the communications climate. There is evidence that district administrators, on an individual basis and within their role responsibilities, attempted to establish and maintain frequent personal interaction with key implementers, that is, department heads and principals within high schools.

Some were more persistent and committed than others. From the school perspective, the perception of district support ranged from little or no support to positive support. The individual personalities and characteristics of the various actors seemed to play a role in determining the perception of support. The data confirm the existence of multiple realities with respect to district/school support of the implementation of the new graduation requirements.

### Board and Community Characteristics

The literature on parent and community involvement in schools "appears to be a mass of contradictions, confusion, and hopelessness" (Fullan & Stiegelbauer, 1991, p. 227). More recent research has found that parental involvement in the instructional process, both in the classroom and at home, has had much greater influence on student learning and academic achievement than parental involvement in governance and school community relations. Positive academic success resulted when parents were actively engaged as volunteers and assistants in classrooms, and assisting their children at home with learning activities.

Fullan (1982) affirms that community support of schools correlates positively with innovativeness. He goes on to add that most school communities do not become involved directly in implementation unless they have become aroused about the particular innovation. In the case of the River City School District, the chairperson of the School Board indicated feedback from the community relating to the new graduation requirements was limited to concern about the new science program:

> I can't say that I am getting feedback from parents. I haven't really heard from people generally speaking. Of course, the new science program has been a concern, and I certainly did hear from parents on that. I think there is some feeling of complacency--its not complacency as much as maybe resignation--that so, this is what it is.

The chairman's remarks were echoed by the administrators and consultants who were interviewed for this study. There was very little involvement from the district community regarding the new graduation requirements in general. Certain components of the requirements, namely, the science program, did elicit concern that will be considered more fully in the next chapter. Even the controversial sexuality unit of the CALM program seemed to escape the scrutiny of parents. The chairperson commented that

> I haven't had any concerns expressed to me about that [CALM] at all. Certainly there is that opportunity for parents to have their children opt out of those courses. My information is that very, very few parents do that.

Another consultant indicated that the calls he received from parents were more likely to be concerned with the "nature of things that they feel should be included in the curriculum and for one reason or another they are not." In general, he felt that parents today seem to be much more supportive of trying to get their children to work harder.

The associate superintendent indicated that he had met parents who were very concerned about the new graduation requirements. Some parents expressed the feeling that they are "limiting their child's experiences in school," whereas other parents were saying "it's about time they concentrated on the things that really matter." He commented that "you are getting two sides, you always do in education." He went on to describe what he labeled "The Woodward's Philosophy of Alberta Education, that is, the client is always right, the parents, the public pay the bills. Change not for change's sake, but rather because the MLA's and public demands it." His point was to suggest that Alberta Education was more responsive to the opinions of some parents and vocal members of the public and less responsive to the opinions of educators in establishing the secondary education policy and the new graduation requirements.

In general, the findings of this study compare favorably with Fullan and Stiegelbauer's conclusion that most communities do nothing, either because of passive support or apathy, "to initiate or have any major role in deciding about innovative programs" (1991, p. 243). The River City School Board, on the other hand, did make serious efforts to influence Alberta Education in determining the secondary education policy and the new graduation requirements through a series of position papers that envisaged its particular beliefs about secondary education.

## Discussion of the District's Role in Implementation

The River City School District, acting in good faith based on communication from Alberta Education, believed that an interactive participatory model would be used in the development of the new secondary education policy and structured its actions accordingly. Through the submission of three formal position papers and various informal discussions, the district proposed a vision for secondary education and the new graduation requirements which put it in an adversarial position with the department. The effect of developing its vision for secondary education set the district's expectations for the new requirements and strengthened the district's commitment to its own vision of the projected changes.

Although there were several areas in which the district and Alberta Education visions for the new requirements were in agreement, there were also several areas in which there were substantial differences of opinion. The perceptions of the school district differed from the perception of Alberta Education with respect to the goals of the secondary education policy and the new graduation requirements. Alberta Education was attempting to introduce reform through what Fullan and Stiegelbauer (1991) call *intensification* efforts. These types of efforts are intended to bring about a systematic change in education by increasing the definition of curriculum, mandated textbooks, standardized tests tightly aligned with curriculum, specification of teaching, and administrative methods backed up by evaluation and monitoring. Comprehensive efforts intensifying existing procedures are characteristic of systematic top-to-bottom change. On the other hand, the district leaders looked at the secondary education review as an opportunity for restructuring education. They identified issues and concerns that they believed Alberta Education needed to address in the new policy, including school-based management, enhanced roles for teachers in instruction, integration of multiple innovations, restructured timetables supporting collaborative work cultures, new roles such as mentors, coaches, and other teacher leadership arrangements, and revamping and developing the shared mission and goals of the school among teachers, administrators, the community, and sometimes the students. The differing visions between Alberta Education and the River City School District directly affected the adoption process. The district failed to develop a commitment to the new graduation requirements and embarked upon a half-hearted implementation. Sarason (1991) comments on the effect of top-down implementation strategies:

> educational reformers have trouble understanding that change by legislative fiat or policy pronouncements from on high is

> only the first and the easiest step in the change process, a step that sets in motion the dynamic of problem creation through problem solution. Content to remain on that first step, assuming as they do that the goals of change can be achieved by a process that could be called human mechanical engineering, insensitive as they are to what the change will activate in the phenomenology of individuals and their institutional relationships, they confuse a change in policy with a change in practice. (p. 101)

River City School District believed that Alberta Education was using an interactive political process as the model for development of the new secondary education policy and the new graduation requirements. The district believed that its input had merit and would receive consideration.

In the earliest stages of the process, the district acted in good faith. When it failed to see substantial evidence of its position in the policy and new graduation requirements pronouncements, a power struggle resulted. The district attempted to protect and promote the interests of its clients: first, through criticism of Alberta Education's directions and later by joining the lobby to negotiate a refinement to the structure of the science program.

# CHAPTER 7

# COMMUNITY FACTORS AFFECTING IMPLEMENTATION

Fullan and Stiegelbauer (1991) suggest that communities have three options when confronted with change. They can pressure district administrators "to do something" about a problem, they can oppose the specific innovation, or they can do nothing. In the majority of situations, Fullan and Stiegelbauer conclude that "school boards and communities do not initiate or have any major role in deciding about innovative programs" (p. 243). On the other hand, they provide evidence that when boards and communities become aroused they can be "radically powerful" (p. 243). Furthermore, they suggest that when ignored, boards and communities are capable of bringing an end to innovations adopted without consultation. This chapter documents the action of the aroused science community and the collective assessment of leading educational stakeholders in response to the dual diploma structure of the new graduation requirements.

Other studies have found that, in cases involving conflict, the community groups nearly always prevailed. Disregard of community opinions often leads to failed implementation (Gross et al., 1971; Smith & Keith, 1971). Stakeholder groups by virtue of their collective power and skillful capabilities have intervened successfully to reject innovations that are ill conceived and inconsistent with community values. Community groups in Alberta were instrumental in forcing the government to re-examine the structure and content of the new graduation requirements.

During the course of the development and implementation of the new graduation requirements in Alberta, two objections emerged. The first demonstrated opposition to the changes in the graduation requirements while the second demanded that the government "do something about" the graduation requirements. This chapter will first address the widespread concern among the science community about the science program. This will be followed by a discussion of the ongoing concern expressed by educational stakeholders regarding the dual diploma structure and the number of mandatory credits required for high school graduation. Both of these matters forced the Minister of Education and Alberta Education to make or propose adjustments to the graduation requirements.

The influence of these community stakeholders together with the changes they were able to effect as a result of their actions is described in this chapter. The data analyzed in this chapter were collected primarily from print materials including government publications, stakeholder documents, and media clippings that were supplemented with data obtained through interviews with individuals associated with the stakeholder groups. The concerns surrounding each issue are examined, analyzed, and discussed separately.

## Challenges to the Science Program

The proposed changes to the science program can best be described as a shift in emphasis from science as isolated specializations in chemistry, biology, and physics to science that embraces its relationships with society and technology. The initiative for the changes originated with Report #36 from the Science Council of Canada (1984), which was influential in the development of the *Secondary Education in Alberta* (Government of Alberta 1985) policy statement. Table 20 presents a time line establishing the development of the science program changes, the challenges that arose, and the resolution of the problem.

Table 20

The Evolution of the Science Program

| | |
|---|---|
| April 1984 | Release of the Science Council of Canada Report: *Science for Every Student* |
| June 1985 | Release of the Government of Alberta policy statement: *Secondary Education in Alberta* |
| 1986/87 | Informal meetings between Alberta Education science consultants and officials with science teachers, university science professors and post-secondary registrars |
| June 1987 | Alberta Education releases *Proposed Directions for Senior High School Programs and Graduation Requirements* (Alberta Education, 1987a) outlining major changes to the high school science program including the introduction of the Science 10-20-30 stream, the elimination of Biology 10, Chemistry 10, and Physics 10, and an increase from three |

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| | to five credits for each of Biology 20, Chemistry 20, and Physics 20 |
| January 1988 | The Dean of Science, University of Alberta, establishes a committee to investigate the changes to the structure and content of the secondary science program in Alberta |
| February 1988 | Alberta Education issues *Senior High School Graduation Requirement and Program Development Update* confirming the structural changes to the science program and reducing the credit value of Biology 20, Chemistry 20, and Physics 20 to three credits per course |
| April 1988 | Letter of protest to the Vice-President (Academic), University of Alberta, regarding pending changes to the structure and content of the science program from 33 University of Alberta professors in the Department of Physics |
| January 1989 | Meeting of about 80 Edmonton and area science teachers to develop a plan of action to express concern about the impending changes |
| January 1989 | A University of Alberta physics professor circulates a "Dear Friends" letter encouraging colleagues and friends concerned about education to "take political action" |
| February - May 1989 | Alberta Education receives between 650 and 700 submissions from teachers, science educators professional organizations, school boards and central office personnel regarding the new science program |
| April 1989 | Alberta Education announces a delay in the implementation of the Science 10-20-30, Biology 20-30, Chemistry 20-30, and Physics 20-30 courses. The announcement asserts that the delay does not mean that Science 10-20-30 is being reconsidered, nor that Biology 10, Chemistry 10, or Physics 10 is being retained |
| May 1989 | The University of Calgary announces that it will recognize Science 30 as a category "B" admission requirement |
| May 1989 | The University of Alberta rejects Science 30 as a subject for admission into any faculty at the university as either a required or optional subject |
| July 1989 | The Minister of Education establishes the Committee on High School Science Programs with representation from post-secondary institutions, industry, the engineering profession, school trustees, and the ATA to advise him "on quality, structure, and content of the secondary science programs" |
| January 1990 | After receiving the report from the Committee on High School Science Programs, the Minister of Education announces his decision to<br>* proceed with the Science 10-20-30 courses |

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|---|---|
| | * require Science 10 as a prerequisite for all 20-level science courses<br>* increase the credit value for Biology 20, Chemistry 20, and Physics 20 to five credits per course<br>* revise the content of Biology 20-30, Chemistry 20-30, and Physics 20-30 to better prepare students for post-secondary studies and careers in science; i.e., make the courses more academically rigorous<br>* revise the goals of science education to focus on fundamental science concepts and their application |
| January 1990 | The Minister of Education announces a further delay in the high school science program implementation: Science 10 will be introduced in September 1992, with Science 20 being introduced in September 1993 and Science 30 in September 1994 |
| September 1991 | Selected high schools in Alberta begin to field test the newly revised Science 10 course |
| October 1991 | University of Alberta agrees to recognize Science 30 as a Category "C" admission subject. |

### Background to the Changes in the Science Program

The change in emphasis for science programs in Alberta was influenced by a 1984 report of the Science and Education Committee of the Science Council of Canada. The contents of this report influenced the Alberta government's policy on secondary education announced in 1985.

The Science Council of Canada report. The report, *Science for Every Student: Educating Canadians for Tomorrow's World* (Science Council of Canada, 1984), was the culmination of a four-year study that analyzed historical, and current practice in science education in Canada. Its objective was to stimulate active deliberation for science education in the future (Drake, 1984). The report recommended that Canadian students receive the best possible *general* education comprising not only the traditional basics of language and mathematics, but also the new basics of science and technology. In addition, it recommended that science be taught at all levels of schooling with an emphasis and focus on the relationship of science, technology, and society (STS) in order to increase the scientific literacy of all citizens through appropriate, balanced science education programs for all students (Science

Council of Canada, 1984). The Science Council of Canada's recommendations are consistent with the objectives of what has become an international STS movement which broadens the base of science education by integrating accurate and authentic presentations of the nature of science, the nature of technology, and their interactions with each other and with society into the science program (Alberta Education, 1989e).

A major finding of the Science Council study revealed a serious gap between what science education was supposed to achieve and what it actually achieved. To effect the renewal of science education the committee urged adoption of eight general initiatives and 47 specific recommendations. The report's compelling conclusion suggested that "any delay in renewing our science education systems threatens Canada's capacity to participate in a changing world" (p. 11).

This report affected the development of the policy statement, *Secondary Education in Alberta* (Government of Alberta, 1985). Commenting on the Alberta government's acceptance of the Science Council report, one science consultant observed that the focus on global competitiveness that pervaded the political reality of 1984-85 was a significant factor in the Alberta government's acceptance of the report. He felt that it was the government's intention to establish a strong foundation in science from grade one to 12 to encourage more students to continue their post-secondary education in science and technological fields as well as prepare future citizens with a better understanding of the impact of science and technology in their daily lives.

Changes to the science program in Alberta. Alberta Education deemed that structural and curricular changes to the science program were necessary to achieve the goal of increasing the scientific literacy of all citizens. It was noted that "of all the changes in high school courses being made as a result of the secondary education policy, none is as comprehensive as the change in both the structure and content of science programs" (1989f, p. 4). It was through the new graduation requirements that these structural and content changes to science were introduced to the high school program in Alberta. The changes in the approach to science education were designed to accomplish three things:

* to help students become scientifically literate

* to help students to use their scientific knowledge to become socially responsible and

* to motivate students to learn and understand science. (Alberta Education, 1989e, p. 5).

According to Alberta Education, the curriculum was revised to give students an opportunity to learn about the importance of science to the conduct of their everyday lives following recommendations from the Science Council of Canada report which stressed the interrelationship of science, technology, and society (de Luna, 1989b). An Alberta Education official added that the new program emphasized the process-inquiry dimension as opposed to the lecture-oriented delivery structure that was quite typical [in science programs] across the province.

While all science courses were scheduled for major content redevelopment to achieve these goals, most of the structural changes affected students enrolled in the Advanced Diploma. The major shift was the introduction of a new stream of three five-credit science courses entitled Science 10, 20, and 30. These new science courses were designed to integrate "pure" science with its application to the real world and enable high school students to learn about the importance of science in the conduct of their everyday lives (Alberta Education, 1989e). To accommodate the new general science program, Biology 10, Physics 10, and Chemistry 10 were being phased out, and the credit value of each of Biology 20, Physics 20, and Chemistry 20 was to be reduced from the proposed five credits to three credits.

Students enrolled in the General Diploma program were required to increase the number of credits they obtained in science from five to eight in order to achieve their diploma. The Science 14-24 courses were designed for less capable students in the General Diploma program, although any eight credits in science could be presented. The challenge to the science program focused entirely on the so-called academic stream of science courses including the Science 10-20-30 and the specialized science courses. The non-academic courses (Science 14-24) were never an issue brought forward by the stakeholders; and, in fact, the Science 14-24 courses were the only science courses that were implemented according to schedule.

Draft curricula for the new science courses were prepared by science teachers from across the province under the direction of Alberta Education staff (Dinning, 1990a). Dinning goes on to say that over about 18 months, science teachers from around the province developed

> a new curriculum that reflected the guidelines of the government policy. This policy . . . stated that science programs should help students understand basic scientific concepts and their application to our world. In other words, they should help students understand the social, technological, and environmental impact of science and the moral and ethical issues that accompany the use of scientific knowledge. (p. 6)

Draft curricula were circulated to schools and interested parties for comment.

During this period of program development, Alberta Education was also experiencing staff changes. A member of the Science Curriculum Committee suggested that the turnover of personnel at Alberta Education "created some mistrust on the part of the universities and some science teachers." He referred to situations where "one person was saying something that was not consistent with what another person, or the Director or the Assistant Deputy Minister, had said." He went on to say that the people involved were all good people and that none were irresponsible, "but you change three people in the course of three years or three-and-a-half years and, assuming that it takes about six months to learn the job, it's tough." The committee member believed that this situation contributed to some of the communication problems between the department and the stakeholder groups.

### Challenges to the Proposed Restructuring

According to an Alberta Education official, the department endeavored to inform stakeholders of the impending changes to the structure and curriculum of the senior high school science program. The Director of the Curriculum Design Branch indicated that information bulletins were issued, and interested individuals and organizations could request specific program drafts as they became available. Another Alberta Education official outlined the concerted effort made to keep stakeholders informed:

> we selected groups, we arranged for presentations, we phoned the President of the University Coordinating Council to get on their agenda when all the Presidents met. One time, we arranged through the President to attend the General Faculties Council meeting. We did that with the key people in the college system. We did that with the CASS group of superintendents. We basically said that we were available to come and talk to them.

Through these many efforts, Alberta Education believed that stakeholder groups throughout the province had opportunities to become aware of the proposed changes and provide Alberta Education with their feedback.

University of Alberta concerns. Faculty at the University of Alberta had the opportunity to become familiar with the impending changes to the science program through a variety of sources. According to an Alberta Education source, faculty members could have learned about the new general science program from the university representative on the Alberta Education Science Curriculum Committee or through informal contacts with ATA Science Council teachers. University administrators became aware of the new structure through the Senior High School Curriculum Coordinating Committee while still others learned of the changes through the Alberta Education presentation to the General Faculties Council. A member of the Faculty of Science indicated that these communication linkages failed to alert most science professors to the impending changes.

Early in 1988, the Dean of the Faculty of Science established the Faculty of Science Ad Hoc Committee on the Proposed Revision to the High School Science Program, an interdepartmental committee charged with the responsibility of studying the proposed new curricula and the program delivery structure. The committee included representatives from each of the major departments in the faculty but not science specialists from the Faculty of Education. Many Faculty of Science educators expressed concern that the new general science course would be a "watered-down" science course and further, that it did not provide sufficient opportunity for advanced and more capable students to develop their talents and interests in science. According to one committee member, the committee did not object to the introduction of the general science course; they thought "that it was great" because it allowed more students to take science courses. The objection, he said, was to the removal of the specialized science courses at the grade 10 level. Concern was also expressed about the decrease in time allocated to the study of specialized science courses and the impact this would have on curriculum articulation for students entering science-related programs at the university.

After studying the matter, 33 physics professors signed a letter to Dr. J. P. Meekison, Vice-President (Academic), expressing concern about "weaker preparation in science for students entering Physics 20, Biology 20, and Chemistry 20" (Physics Professors, 1988). The committee attempted to provide feedback to Alberta Education regarding the draft curricula. However, in the words of the physics professor on the committee, "It [the curriculum] became a moving target; we kept on getting draft after draft after draft, sometimes in response to our criticism and perhaps due to second thoughts or whatever. It was quite frustrating." In February of 1988, the physics committee member presented details of his concerns regarding the new science program in a letter to the Director of the Curriculum Design Branch of Alberta Education (Physics Professor, 1988). While acknowledging that his comments were largely negative, the professor offered "constructive considerations" that he believed would be more feasible and acceptable to the university science community. Specifically, he requested that grade 10 level specialized sciences be reinstated and the credit value of the grade 11 specialized sciences be increased to five credits per course. Alberta Education's response reflected the fact it was not able to change the structure as these were components of a political mandate imposed by the government.

At the end of January 1989, a physics professor circulated a "Dear Friends" letter to between 40 and 50 influential colleagues, within both the science and university communities, and parent-friends. His letter outlined the evolution of the concern, stated the current situation, and encouraged political action to "contribute to the development of a more appropriate curriculum" (Physics Professor, 1989). An Alberta Education official indicated that the 650 - 700 letters the department received on the science issue were one of the largest number the department had received on curriculum change in a specific subject. Some of these letters were generated in response to the "Dear Friends" letter whereas others were generated as a result of political action initiated by the Alberta Teachers' Association (ATA) Science Council.

A math-science department head, who was a member of the Alberta Education Science Curriculum Committee, presented an opposing opinion of the proposed changes. He supported the new directions although he felt that those who opposed the changes genuinely believed that the new program should reflect

> purist theories, and a purist approach to science: they didn't want us to spend time doing technological application or even looking at environmental implications or technological applications. They were opposed to the kind of stuff that Suzuki does.

This opinion was echoed by a senior Alberta Education official who felt that a very vocal but sincere minority, both among the university and the science teacher groups, was responsible for challenging the new science program.

The Faculty of Science Interdepartmental Committee, having studied both the proposed structural changes and the proposed content of the new general science, reported that the proposed science program was to say the least "wanting." In the spring of 1989, the Associate Dean of the Faculty of Science at the University of Alberta presented the report recommending that Science 30 not be accepted as a subject for admission to any faculty at the university as either a required or optional subject. The recommendation was accepted by the university's admissions and transfers committee (Elliott, 1989). At approximately the same time, the University of Calgary recognized Science 30 as a "B" category entrance requirement (*Curriculum Corner*, 1989, p. 2).

Alberta science teachers' concerns. In the period immediately after the announcement of the secondary education policy in Alberta, science consultants with Alberta Education began communicating the educational vision of the Science Council of Canada and its implications for science programs to science teachers across the province. Officials talked with various science-related groups of teachers, including school district-based teachers and the ATA Science Council, about the impending changes. One district-based consultant recalled that feedback to Alberta Education consultants at a meeting he attended was fairly significant: "[Science] teachers did not believe that moving away from specialized sciences to a general science course for grade 10 was desirable." He further believed that teachers' initial resistance to the proposed structure was partially to protect current practice and their own territory as specialists. As teachers of Biology 10, Physics 10, or Chemistry 10, they had specific territories and identities that they would lose if Science 10 replaced these courses. This early negative response to the proposed change did not alter Alberta Education's strategy to proceed with their implementation strategy.

Alberta Education's approach was to inform science teachers of the shift in directions and the rationale behind the new paradigm. Alberta Education officials believed that the matter was beyond the discussion stage because the time for input was during the development of the secondary education policy. Nevertheless, some teachers did not agree with the proposed changes and continued to provide negative feedback about the restructuring of the science program. However, Alberta Education moved forward by preparing outlines for the Science 10-20-30 courses and a draft curriculum for Science 10. Science teachers in Alberta were moved to action about the new science courses when they reviewed the outlines and draft of the new curricula. They were very concerned about the quality of the science program that would result from the proposed content.

Science teachers expressed concern not only about the change in philosophy associated with the program changes but also about whether the new goals could be achieved through the proposed new curricula. In describing the new general science course, the President of the ATA Science Council, Gerrit Cuningham, said that it "is a descriptive one that requires little analytical thinking and use of mathematical concepts" (de Luna, 1989b, p. 3). He went on to state that allocating only three credits for each of Physics 20, Chemistry 20, and Biology 20 while assigning five credits for Science 20 was a major stumbling block to achieving teacher support for the new program. The Council President indicated that a second concern of teachers was the understanding that Alberta Education expected about 75% of the student population to enroll in the general science courses leaving only 25% to study specialized science. Science teachers believed that a 50/50 split between general and specialized science course enrollment would be more appropriate (de Luna, 1989a). In addition to providing input to Alberta Education at various specially arranged meetings around the province, many teachers wrote personal letters of protest to the Minister and/or Alberta Education. An Alberta Education official commenting on the teachers' concerns regarding the proposed science courses acknowledged that "teachers were clearly saying that it was a significant change, and they would like to carry out further dialogues on these changes to get across their perceptions on how the program should be structured."

Science teachers were also concerned about the impact of the academic science program on their own teaching assignments. The department head of science at Meadowview High School asked a number of questions illustrating science teachers' concerns. How would the elimination of the grade 10 level specialized courses affect them personally? Would they still have jobs teaching specialized sciences? Who would teach the new general science courses? Would all science teachers be expected to become both generalists and specialists; and, if so, how were they to make the transition? Would there be enough courses for all science teachers to continue to teach science? What inservice would be available? What proportion of students could be expected to enroll in the general or the specialized courses at the grade 11 and 12 levels? Because Alberta Education did not have decisive answers to these types of questions, the lack of clarity only served to magnify some teachers' concerns.

Not all of teachers' concerns about the science program centered on the so-called academic science courses. Teachers also expressed frustration about the quality of the Science 14 course implementation. While the structure and content of the non-academic stream of science was not in contention, another type of implementation problem related to resources emerged. Although a textbook revised to Alberta Education's specifications was developed and delivered on time, the promised back-up resources including suggested activities, teacher's guide, and evaluation strategies did not appear on schedule. The science department head at Meadowview High School suggested that teachers

> are spooked and pretty skeptical, and rightly so. Teachers are trying to implement as best they can and they are very resourceful people. If something doesn't work and if something isn't there, they will go their own way and they'll make it. Then what happens is you get people teaching 150 different Science 14 courses in Alberta. The teachers teaching Science 14 this year are very, very unhappy and very, very disillusioned and unimpressed with what was promised and is not yet here.

The perception was that this type of situation contributed to lack of standardization in programs and defeated the purpose of having a common curriculum. The department head's predictions for the Science 24 program and resources were not optimistic. While Meadowview High School was not offering the program during the 1989-90 school year, he was aware of teachers in other schools who "don't have the materials yet, so they are flying by the seat of their pants." Although the process of each teacher "re-inventing the wheel" provided important personal and staff development opportunities that are fundamental to effective implementation, the compromise was that local material adaptation may not have focused on achieving the program goals. Teachers in this study became discouraged with the change process when their expectations for the Science 14 program were not met, and their anxiety was raised with prospects of expected revisions to the other science programs.

River City School District concerns. The River City School District was sharply critical of the new science course content:

> the topics are "neat" and "glossy," but learning the science content of the topics cannot be achieved because the necessary background knowledge is lacking and cannot be presented in the time allotted. This is disconcerting since students will be asked to make decisions on science and technology in society without understanding the science involved with the issues. (cited in Elliott, 1989, p. A13)

The chairperson of the School Board was aware of the concerns about the science program through district officials and through contact with the University of Alberta and professional associations, and supported the need for additional dialogue on the issue before implementation could take place.

Concerns of the professional associations. When drafts of the proposed science curricula were circulated to professional associations, the concern focused on the content. The Alberta Medical Association and the Association of Professional Engineers, Geologists and Geophysicists of Alberta were among the professional associations to express concern about the science program. It was one consultant's view that the professional associations were not familiar with the new focus of science envisioned by the Science Council of Canada and judged the draft curricula as being "a social studies document." They took immediate political action to make the Minister of Education aware of their concerns.

Delaying the implementation of the senior high science program. In a letter to School Board Chairmen in Alberta dated April 5, 1989, the Minister of Education announced a one-year delay in the implementation of the new senior high school science programs. In spite of the many challenges that were made to the new science courses, the Minister of Education stated in the letter that Science 10-20-30 would be a demanding and rigorous program that would enable students to learn about the importance of science to the conduct of their daily lives. Furthermore, he did not intend to change the basic directions or structure of the program (Dinning, 1989). The Minister stated that delay would enable the development of custom-developed texts and more support resources, provision of inservice and support programs to better prepare teachers for delivering the new courses, and facilitate further response to the draft programs of study by science teachers and university personnel. The announcement concluded by indicating that the existing science courses would meet the science requirements for Advanced Diploma students entering grade 10 in September 1989 and September 1990.

### The Committee on High School Science Programs

In July of 1989, following widespread public criticism of the high school science program, the Minister of Education appointed a committee to advise him on the controversial program proposed by Alberta Education. The committee was to "serve as an external forum for reviewing curricular change in secondary science within the context of established government policy" and "advise the Minister on the quality, structure, and content of the secondary science programs" (Alberta Education, 1989g). Specifically, the committee was requested to

> 1. examine the content and structure of the new curriculum and accompanying resources to ensure consistency with the secondary education policy
> 2. provide opportunities for the Minister to communicate the nature and intent of the proposed secondary science programs to educational associations and the public
> 3. review specific aspects of the secondary science implementation process and its impact on students, teachers, school jurisdictions and educational agencies. (p. 1)

The committee included representatives from post-secondary institutions, industry, the engineering profession, school trustees, the legislature, and the Alberta Teachers' Association.

Dinning said in the legislature that he wanted to consult people from various sectors of society who were critical of the proposed new program in an effort to find "common ground" to give our students the very best science education and to achieve the wider objective of improving the scientific literacy of our citizens. Under the Minister's chairmanship, the committee met several times between August 1989 and January 1990. In addition, the committee held meetings across the province with teachers, public and private corporations, and professional groups. According to Alberta Education, "these meetings played an important part in clarifying directions for the science programs and making improvements" (Alberta Education, 1990b, p. 5). The final meeting focused on providing the Minister with advice and resulted in the Minister's January 26, 1990 statement regarding the future direction for development of the senior high school science program.

The Minister of Education, Jim Dinning, states that "most of the time, working together and seeking consensus are the only reasonable ways in which to proceed" (Dinning, 1990a, p. 7). This was the process he chose to resolve the problem of the science program implementation. In seeking consensus there was an implied question of negotiation, that is, give and take. With the exception of raising the credit value of Biology 20, Chemistry 20, and Physics 20 from three to five credits, the Minister was successful in maintaining the basic structure of the science program as it was originally proposed. He was not as successful in maintaining the science, technology, and society goals and content of the program. The Minister of Education reversed the direction of the science program as a result of advice he received from his advisory committee. Whereas the original intent of the Science 10-20-30 courses was to present a broad science-technology-society integrated approach, the press release describes these courses as focusing on "fundamental science concepts and their application" (cited in Teachers Cautiously Approve New Science Curriculum, 1990, p. 1). A school district-based science consultant commented that "the revised draft of the general science course resembled a more traditional science curriculum than the previous one" and further that "because of the politicization of the process, the whole matter of science, technology, and society has been minimized, if not lost altogether."

### Analysis of the Science Issues

Fullan and Stiegelbauer (1991) identified two main forms of non-instructional parent and community participation in educational change. One relates to active involvement in governance, advisory councils, and associations while the other relates to broader involvement in community school relations and collaboration. The community of parents of the students at Meadowview High School did not express concern about the newly mandated science program and, consequently, they did not take action to prevent its implementation. However, a group of concerned citizens external to the school community, most of whom were science educators or science professionals, emerged. This group lobbied the Minister of Education and Alberta Education officials and was successful in voicing its concerns and effecting change. This finding is supported by Joyce (1978) who found that when parents had a clear task they could be very effective in influencing decisions. Those parents and citizens who showed concern about the science program had a clear task, namely, preventing the mandated change from being implemented, and influencing the development of the science program which was consistent with their own vision for the program. The data in this study show that the concerns raised by interested Albertans forced the government to review its earlier decisions and undertake extensive revisions to the new science programs.

In adopting the approach to science education as presented in the Science Council of Canada report, the Government of Alberta and Alberta Education assumed that science stakeholders in the province agreed with the new directions set out for science education, especially the goal of integrating science, technology, and society. This led to the second assumption which was that the problem of changing the science curricula was a well-structured problem that could be dealt with through the classical/managerial perspective of implementation. By developing a rational, detailed implementation plan and informing stakeholders of the process, Alberta Education assumed that implementation would logically follow. These assumptions proved to be incorrect and created major barriers to the implementation of the science program. The original plan for the science program led Alberta Education into the trap of what Fullan calls "false clarity" (1982, p. 58). In other words, the change may have been interpreted in an oversimplified way: there was more to the proposed change than was readily apparent.

It is clear that some stakeholders did not agree with Alberta Education's interpretation of the Science Council of Canada vision of integrating science, technology, and society into the science curricula. While none of the stakeholders disagreed with the broader goal of graduating scientifically literate citizens, difficulty arose in ascertaining how that was to be achieved in practice. Some members of the science community, including some science teachers, believed that students required a foundation in basic science concepts before they could understand them in a societal context. This was in conflict with their perception of the structure and content of the draft curricula that were being circulated. One science teacher commented that Alberta Education had developed curricula that presumed that students either already understood the scientific concepts or could learn them as they were presented in the course. In addition, the university science community was concerned that opportunities for capable, advanced students were being limited by eliminating their accessibility to specialized science courses at a lower grade level. This study has found that collective intervention of science educators and science professionals from across the province was instrumental in the establishing the review of science program structure and content that led to its restructuring.

The intervention of the University of Alberta in the secondary education process demonstrates the power of post-secondary institutions in determining curricula. University of Alberta science educators expect the high school science program to nurture capable and talented students through opportunities to study specialized science courses in the belief that these experiences will challenge these students to pursue the study of science at the university level. Secondly, this study found that the University of Alberta science educators expect entering students to have achieved certain levels of proficiency as a result of completing certain secondary level courses. The faculties of Science and Engineering then claim to use these proficiency levels as the basis for their entry-level courses.

Although there was certainly no legal obligation on the part of Alberta Education to consult with post-secondary institutions and professional associations when courses are restructured, this study clearly demonstrated the dilemmas that can arise when consultation with those who have a vested interest in programs does not result in consensus. Post-secondary institutions and professional groups operated at arms-length from the education system. Nevertheless, they were prepared to intervene when their best interests were in jeopardy. In response to a question about who decides what children will learn in school, the Minister of Education replied, "Albertans decide" (Dinning, 1990, p. 6). Identifying which "Albertans" to consult in reaching the decision about how to structure the science program was a secondary problem.

Finally, it appears that timing was problematic in the implementation of the science component of Alberta's secondary education policy. Changes in Alberta Education personnel, "mixed" messages, and assumptions about the success of their communication efforts created uncertainty among science educators and professionals. Stakeholders did not have sufficient or satisfactory opportunities to develop shared meaning about the paradigm shift proposed for the science programs.

The individuals who were involved in preventing the implementation of the science program as it had been originally proposed were a select group of parents and citizens. They were individuals who had expertise in the subject area by virtue of their own education and training: science teachers, science professors, and members of science-related professions. Their level of education was above the norm. Furthermore, they understood the political process and knew how to use it to achieve the ends they sought. The lack of protest action on the part of the Meadowview School parents may be explained in part because they did not comprehend the issue because they lacked the science expertise necessary to identify the potential problem.

The restructuring of the high school science program became a mess of problems or what Mitroff (1983) calls "wicked problems." The problem was not simple or singular as Alberta Education assumed. Furthermore, Alberta Education conceptualized the science problem incorrectly. Miles asserts that one of the primary tasks of planning and implementing new programs is attending to political stabilization in relation to the community (1987). Alberta Education failed to identify the Science Faculty professors at the University of Alberta as relevant stakeholders and minimized the potential barrier to implementation from the negative feedback of some science teachers.

Mitroff (1983) suggests that the influence of stakeholders is not just the influence of the stakeholder on the organization but also the influence of the organization on the stakeholder. He goes on to suggest that the assumptions held by stakeholders about a mess of problems, that is, ill-structured, complex problems, are critical to the determination of the success or viability of a policy. Mitroff contends that the identification of stakeholders is essential for identifying their assumptions about a particular policy. He suggests that policy makers cannot hold nor understand the same world view as all of the stakeholder groups and therefore they are not able to identify stakeholders' assumptions. Assumption analysis is recommended as a means of resolving complex problems because, according to Mitroff,

> working on complex problems *is above all a behavioral process* [author's emphasis] for allowing persons to see their differences in perceiving stakeholders, (who is involved, who should be considered), in naming assumptions (what the stakeholders are presumed to be like), and in mapping (what is important and

what is felt to be known). (p. 29)

It was only after the Minister of Education convened a committee to investigate the challenges to the science program that science stakeholders were given the opportunity to systematically resolve their differences in a constructive fashion. It is unfortunate that Alberta Education did not employ a more effective stakeholder monitoring system at the outset of the science program development. Quality involvement of stakeholders during the structuring phase of the science program development could have prevented the conflict that evolved, reduced the waste of valuable resources, and made an appropriate science program available to Alberta students at an earlier date. The example of the science program changes is a classic case of what Fullan and Stiegelbauer identify as "divergent worlds." They suggest that

> government agencies have been preoccupied with policy and program initiation, and until recently they vastly underestimated the problems and processes of implementation. To the extent that each side is ignorant of the *subjective* world of the other, reform will fail--and the extent is great. (1991, p. 79)

Alberta Education acted as if the only prerequisite to effecting change was to explain and mandate the change. Bosetti concludes that implementation can fail "when the realities of practice are not taken into consideration" (1990, p. 192). Alberta Education failed to establish what Fullan and Stiegelbauer (1991) label a *processual* relationship with appropriate stakeholders. The failure to develop a shared meaning of the proposed science changes among the stakeholder groups resulted in the initial misunderstanding and conflict that led to the restructuring and delay in implementing the science program.

## Challenges to the Two-Diploma Structure

Throughout the development of the new graduation requirements, controversy about the two-diploma structure presented a dilemma for the government. One senior Alberta Education official suggested that "we have always traditionally, historically, thought of two routes: matric and non-matric, the non-matric being associated with the general and the matric being associated with the advanced." Nevertheless, prior to 1983, all high school students achieving a basic set of requirements received the same diploma. The story of the evolution of the General Diploma and the Advanced Diploma was presented in Chapter 4.

According to the Deputy Minister responsible for student programs, some people advocated a system that would enable them to identify the capabilities of graduates according to the type of diploma they had achieved. On the other hand, other educational stakeholders advocated a flexible single diploma that would recognize individual student capabilities. When faced with diametrically opposing views, the Minister of Education reflected that the government decides by listening

> to all views, but we must also try to look toward the future; we must protect the rights of minorities, and we must--most of all--do what is best for our children. Keeping in mind all the professional advice we've received and the strongly held views we've heard, we as a government must make a final decision. We must provide leadership. (Dinning, 1990a, p. 7)

The government in this case decided to continue with the two-diploma structure that was initiated just prior to the release of the secondary education policy statement in 1985.

Several organizations studied the *Proposed Directions for Senior High School Programs and Graduation Requirements* (Alberta Education, 1987a) and the *Senior High School Graduation Requirements and Program Development Update* (Alberta Education, 1988a) and submitted briefs to Alberta Education reflecting their considered opinions. The responses of two provincial organizations, the Alberta Teachers' Association and the Alberta School Trustees' Association, will be reviewed as background to the challenge to the dual diploma structure.

### The Alberta Teachers' Association Position

In its March 1985 response to the *Review of Secondary Programs, Report of the Minister's Advisory Committee* (Alberta Education, 1985), the Alberta Teachers' Association (ATA) strongly advocated the use of one high school diploma which would avoid the confusion and misunderstandings that arise from a multiplicity of diplomas. The Association reiterated its position in commenting on the *Proposed Directions for Senior High School Programs and Graduation Requirements* (Alberta Education, 1987a).

While the ATA agreed that the General Diploma "provides more opportunities to pursue and develop individual aptitudes and interests in a variety of complementary areas" (1987, p. 16), it also contended that students in the Advanced Diploma program would "have less opportunity than general diploma students to pursue special interests and aptitudes via the school route" (p. 16). The ATA claimed that students and parents would mistakenly believe that the Advanced Diploma was better, and admonished Alberta Education to "quit misleading students/parents into thinking that an Advanced High School Diploma is superior when it is not" (p. 16).

While the Association agreed that the Advanced Diploma program would provide a challenge for academic students, it also believed that academic students could be equally challenged in a General Diploma route. The Association concluded by stating that a diploma "is attestation to completion of a certain high school program, no more--no less" and repeated its preference for "one high school diploma with recognition given for completion of special programs of study" (1987, p. 18).

Insofar as the proposed directions for program content and course sequences, the Association was critical of the content of the Advanced Diploma. The program specified for an Advanced Diploma was seen to be "promoting a program much like that in the 1940s and 1950s" (Alberta Teachers' Association, 1987, p. 19) in that it was less flexible and offered fewer opportunities for capable students to pursue special interests and develop their talents.

As has been documented in Chapter 5 of this study, the official position of the Alberta Teachers' Association was not shared by members of the Association who participated in the Association's study of the secondary education policy. The majority of teachers surveyed in the ATA study believed that the two-diploma structure would give much-needed substance to the concept of an academic education and, therefore, favored the dual diploma structure.

### The Alberta School Trustees' Association Position

In a study of the educational changes brought about as a result of the changes in the secondary education program, the Alberta School Trustees' Association (ASTA) made a total of seven recommendations to Alberta Education (Alberta School Trustees' Association, 1988). While the ASTA Task Force commended Alberta Education for endeavoring to provide programming to meet the needs of students of various ability levels, its first recommendation advocated "a single school completion certificate that indicates the student's achievement" (p. 5).

Alberta Education projected that the General Diploma program would meet the needs of approximately 60% of the province's high school students, whereas the Advanced Diploma would serve approximately 30% of students. The ASTA report projected that the "more rigorous entry requirements at post-secondary institutions and the lure of the '*Advanced*' Diploma would entice many students to enter the Advanced Diploma program" (1988, p. 5). In fact, according to the Association's indicators for grade 10 students entering high school in September of 1988, over 60% of students in some jurisdictions were choosing the Advanced Diploma route. The Association believed that this phenomenon would lead many students to failure.

The ASTA report noted the discrepancy between the *Secondary Education in Alberta* (Government of Alberta, 1985) policy statement goal that aimed to "educate students to recognize and make choices" (p. 7) and the new diploma requirements, especially in the Advanced Diploma Program, that increased the number of specified credits and, in fact, reduced students' choices in determining their high school programs. The report concluded that in a program designed to teach students about choices, there were very few opportunities for decisions to be made. The Advanced Diploma program was particularly criticized for being "too prescriptive and lacking in the flexibility that would allow students to make informed decisions about their high school program" (p. 13).

By increasing the number of compulsory credits, the Association anticipated the emergence of a credit crunch which would prevent students from developing special skills and interests through the pursuit of complementary courses. The ASTA also expressed concern about the reduction in the number of non-academic courses and projected "that with fewer choices available to the less academically oriented student, there is an increasing potential for more drop-outs" (1988, p. 7).

The ASTA perceived both the General and Advanced Diploma programs as being aimed at the academically able student. While the report did not advocate a "wide open, do-your-own-thing program," (p. 13) and applauded the academic rigor, it also expressed concern about students who were unable to succeed in such programs. In response to the Alberta Education indication that some students may wish to complete their high school programs in four years rather than three, the ASTA expressed concern about the serious implications for high schools. Specifically noted were the possibility of a drastic change in the climate of high schools due to the increased number of 19- and 20-year-old students and the funding costs for the extra year students.

While the Alberta School Trustees' Association indicated support for the basic principles outlined through the *Secondary Education in Alberta* (Government of Alberta, 1985) policy, there was disagreement with how the goals were translated into an action plan via the new high school graduation requirements. Rather than empowering students to make choices, the *Proposed Directions for Senior High School Programs and Graduation Requirements* (Alberta Education, 1987a) reduced choices by increasing the number of prescribed courses. At the same time, the addition of new courses including CALM, the Social Studies 13, 23, 33 stream, and the general science stream added more courses. The irony of adding more courses and streams, while at the same time reducing the opportunity to select the new courses, was seen as paradoxical. The Association's Task Force implied that Alberta Education's actions were in contradiction to its own stated goals. The position paper highlighted the areas of discrepancy. The ASTA, like the ATA, supported the concept of a single high school diploma and made its beliefs known to Alberta Education prior to the implementation of the new high school graduation requirements. Neither Alberta Education nor the Government of Alberta were prepared to accept the challenges to the dual diploma structure and the plan to implement the changes proceeded according to the previously announced schedule.

### Monitoring the Secondary Education Policy

After initiation and adoption, the third major responsibility of ministries of education according to Fullan and Stiegelbauer "is to assess the use and impact of public policy in education" (1991, p. 277). This process is referred to as monitoring and evaluation. Dunn describes monitoring as the "policy-analytic procedure used to produce information about the causes and consequences of public policies" (1981, p. 278). According to Fullan and Stiegelbauer (1991), monitoring activities take on many forms. Educational policies may be monitored through the collection of data on student attitudes and achievement and the perceptions of parents, teachers, administrators, and other district staff on matters relating to curriculum and its use. The major issues in monitoring and evaluation relate to what data to collect, how to collect it, and most importantly, how to use it. Summative assessment is most often used to revise policy, whereas formative assessment tends to be used to improve practice.

In the summer of 1985, after the policy statement was announced, Alberta Education developed an implementation strategy that included a series of recommendations relating to the curriculum development processes, how various issues were to be dealt with, costs and budget projections, and a process for monitoring and evaluating the implementation. According to one official, "unfortunately, that whole implementation plan and all the recommendations did not go very far, did not get very much attention and as a result, nothing really did get done."

Late in the fall of 1989, the question of monitoring and evaluation was raised again. The Director of the Policy Secretariat indicated that some consideration was being given to consulting stakeholders about their perceptions of the implementation. The Minister of Education announced his intention to hold a forum to assess progress towards implementing the *Secondary Education in Alberta* (Government of Alberta, 1985) policy at the 1989 Alberta School Trustees Association annual conference.

### The Minister of Education's Forum

Early in 1990, the Minister formally announced a curriculum symposium to examine the implementation status and reflect on the success of the secondary education policy. A wide variety of stakeholder groups from throughout the province were invited to attend the forum in Edmonton on September 21 and 22, 1990. The 170 participants included representatives from the following organizations (Alberta Education, 1990c):

* chambers of commerce
* Conference of Alberta School Superintendents
* high school students
* home and school associations
* independent schools
* Junior Achievement
* Learning Disabilities Association
* Alberta School Trustees' Association
* Alberta Teachers' Association
* Association for Bright Children
* university faculties of education

* Alberta Education. (pp. 1-2)

Each registrant received a copy of *Secondary Education in Alberta: A Policy Implementation Status Report* (Alberta Education, 1990d). This report listed the department's accomplishments since the secondary education policy statement was released in 1985 by stating each of eight guiding principles and reviewing the actions taken to support each principle. Among the achievements listed are

- the development, revision, or updating of more than 100 secondary courses
- financial support for the purchase of new learning resources and teacher inservice
- the introduction of new diploma requirements based on a broad, general education for students of all abilities
- the development of the school-community partnership concept
- the distance education initiative
- the educational response centre and ASPEN.

The report concluded that after five years of working to fulfil the directions of the secondary education policy statement, Alberta Education had improved the education of Alberta students (p. 17). The claim was supported by evidence of improved student performance on diploma examinations in English, social studies, and physics, a 60% increase in the number of Rutherford Scholarships being awarded since 1982, nearly twice as many students earning Advanced Diplomas "with excellence," and over 58% of high school graduates going on to post-secondary education. While acknowledging its many successes, Alberta Education expressed the need for all educational stakeholders to continue to work towards providing students with the kind of education that would enable them to be successful in an increasingly competitive world (Alberta Education, 1990d, p. 18).

The agenda of the forum included both plenary and small group sessions. On Friday evening, delegates heard presentations from the Minister of Education, the Deputy Minister of Education, and a panel of representatives from the Government Education Caucus, the Conference of Alberta School Superintendents, the Alberta School Trustees' Association, and the Alberta Teachers' Association. On Saturday morning, the delegates were assigned to small groups and asked to identify issues of concern relating to the secondary education implementation. Each group then reported on the priority items identified in their discussion group during the morning plenary session. In the afternoon, each group was assigned to reflect on a specific issue and focus on solutions or strategies for dealing with it. Proposed solutions were reported in the late afternoon plenary session.

Outcomes of the Forum

The forum discussion groups identified some 25 issues that were subsequently summarized into the following 11 categories (Alberta Education, 1990d):

> * policy relevance and interpretation
> * stakeholder participation in policy development
> * communication on the policy and its implementation
> * the credit crunch and the two diplomas
> * post-secondary articulation
> * implementing school program change
> * inservice
> * stress of change
> * technology
> * educational funding
> * unanticipated events. (p. 13)

Each working group was assigned to study an issue and report its findings to the afternoon plenary session. While many issues relating to secondary education policy were examined during the forum, one delegate indicated that "the two biggest concerns expressed were the dual diploma structure and the overall emphasis on academics." Another participant said that the Deputy Minister of Education "took the attitude that all was well [with the secondary education policy], but the [Saturday] workshop sessions said it was not." A third individual noted that the secondary education policy was "a champagne policy on a beer budget."

This study focused on those matters that pertained directly to the dual diploma structure of the new high school graduation requirements. Information in the next section has been summarized from the *Proceedings of the Minister's Forum* (Alberta Education, 1990c). Participants' perceptions have been included as appropriate.

Policy relevance and interpretation. Although delegates were not critical of the relevance of the secondary education policy and its guiding principles, some delegates expressed concern about the lack of congruence between the policy and how it evolved into policy actions. Delegates commented that, while the policy aimed at providing equal access and opportunities for all students to obtain a broad general education, in reality the policy action tended to overemphasize academic pursuits and university-bound students. The increased mandatory requirements and rewards for academic excellence essential for receiving an Advanced Diploma were cited as narrowing program choices and shifting enrollment away from the fine and practical arts programs. This initiative was not perceived as addressing the special needs and talents of students at *all* ability levels as was intended by the policy.

Stakeholder involvement. Delegates expressed the concern that involvement in policy development and curriculum building was limited to Alberta Education. Their primary concern focused on the department's failure to include others in bringing about change. Stakeholder delegates felt little responsibility for the secondary education implementation plan. They were critical of the department for its "closed shop" attitude in making basic decisions about the choice of change models, the rate of change, and time lines for change, as well as what, why, and how changes would occur. Alberta Education was perceived as making all the decisions and then telling stakeholder groups about the decisions instead of involving stakeholder groups in the decision-making process. It was suggested that better consultation with stakeholder groups could result in fewer misunderstandings about policy decisions and curriculum changes.

Communication about the policy and its implementation. Delegates suggested that neither educational stakeholders nor the public developed the necessary degree of ownership or commitment to the secondary education policy. They expressed concern about the difficulty in communicating the purpose and goals of the policy and the lack of shared understanding as to the meaning of the policy (Alberta Education, 1990d, p. 16). It was pointed out that the policy implementation might have proceeded more smoothly if stakeholders had shared in its development.

The dual diplomas and the credit crunch. It was the general opinion of delegates that both students and their parents perceived that the Advanced Diploma had higher status than the General Diploma and, therefore, could ensure university entrance. Some delegates suggested that business believed that the Advanced Diploma was the only "valid" diploma. The opposite viewpoint was expressed by another participant who indicated that "neither parents nor business seemed to be aware of the dual diplomas and since student achievement wasn't used in screening job applicants, what was the point of two diplomas?" In addition, delegates indicated that achieving an Advanced Diploma was becoming the goal of all students, and students in the General Diploma were becoming stigmatized. Some participants suggested that there was a lack of pride in being anything other than an Advanced Diploma student. A delegate from a large urban district suggested that the status of the Advanced Diploma was "forcing kids to take a run at it" [the Advanced Diploma] thereby "setting kids up for failure because they aren't achieving what they set out to do." The focus on academics was also cited as "leaving little room for other courses," and, therefore, not meeting the non-academic needs of students. The dual diploma structure was seen as failing to meet the needs of average and below average ability students.

Generally, delegates felt that the emphasis was on "students learning more" rather than on "more students learning" (Alberta Education, 1990d, p. 18). The increased number of mandatory courses led to the conclusion that the diploma programs were inflexible and did not provide a general, rounded education. Delegates made several suggestions that they believed would rectify the problems caused by the dual diploma structure: move toward a single diploma, increase the distinction between the two diplomas, increase the choices within a diploma program, or set up actual three- and four-year programs for a diploma.

The increasing number of students returning for a fourth year of high school, either to raise their marks or averages, to take additional courses, or because they were unemployed was of concern to delegates. The additional costs of providing teachers and facilities for this group of students was adding stress to the already overburdened educational budget. Participants representing smaller high schools also reported the difficulty of finding qualified teachers to offer both the academic and the fine/practical arts with the result that their programs tended to focus on university entrance requirements.

Post-secondary articulation. The articulation of post-secondary institutions' entrance requirements with high school programs was of concern to delegates. It was noted that a high school diploma is not required to attend Alberta universities, and that even with an Advanced Diploma, it was possible that a student might not qualify for university entrance. Delegates concluded that "this obviates the need for more than one high school diploma" (Alberta Education, 1990d, p. 20). Some delegates believed that post-secondary quotas and the inflation of entrance requirements contributed as much, or more, to the overemphasis on academics, the credit crunch, and the returning fourth-year students as the existence of an Advanced Diploma.

Implementing school program change. Forum delegates identified insufficient preparation of teachers, school administrators, and jurisdictions for the changes as being the largest obstacle to implementation. There was an absence of plans, strategies, materials, and support to facilitate the implementation. The general feeling was that there was "too much too fast" (Alberta Education, 1990d, p. 21). Efficient implementation requires that the timing of the changes be coordinated with funding. Delegates cited problems in budgeting for staffing needs and inservice programs prior to required implementation. The implementation attempts were further frustrated by cutbacks within Alberta Education, reorganization of Alberta Education staff, reduction of regional office consultation services, and delayed production of some materials by publishers.

Inservice. Inservice issues identified were related to funding, timing, responsibility, control, and ways to assist both teachers and administrators to become aware of impending changes. Insufficient funding, inadequate time to plan inservices, and confusion over role relationships regarding inservice responsibilities were seen as barriers to the implementation of the secondary education policy. Within Alberta Education it was expected that the regional office consultants would assist with inservice. The inservice programs that materialized tended to focus on subject specific program changes and very few, if any, inservice activities targeted the overall policy implementation. In addition, Alberta Education maintained that inservicing of teachers was a professional and district responsibility and to that end, monies were made available to school jurisdictions for inservicing teachers during the mandatory year of course implementation.

Educational funding. Delegates expressed concern about insufficient educational funding. Many of these concerns related to and overlapped with other concerns. One participant suggested that Alberta Education was expecting school jurisdictions "to do more with less, and be all things to all people." Without satisfactory guidance and implementation plans that were correlated to budgets, delegates suggested that school districts were experiencing difficulty.

Unanticipated events. Forum participants identified several events that affected the policy implementation. The two most significant vis-à-vis the new graduation requirements were the perception of the Advanced Diploma and university quotas. Pre-implementation briefs from both the ATA and the ASTA noted the possibility of misconceptions relating to the Advanced Diploma. However, Alberta Education believed that preventative strategies associated with sufficient communication would limit the development of the elitist beliefs about the Advanced Diploma. The more rigorous university entrance requirements and the various faculty quota systems were not factored into the implementation of the new graduation requirements, and these circumstances also affected the implementation .

### Discussion of Challenges to the Dual Diploma Structure

Many of the issues that emerged during the Minister's Forum had been identified to Alberta Education by educational stakeholder organizations prior to the implementation of the new graduation requirements in the fall of 1988. By encouraging stakeholders to provide input regarding the changes to the graduation requirements, Alberta Education led stakeholders to believe that a political model of implementation had been adopted between themselves as policy makers and the stakeholders as implementers. The stakeholders expected to have opportunities, through their position papers and briefs, to negotiate the structure of the diploma requirements. However, as was the situation with the input from the River City School District, Alberta Education failed to give adequate consideration to the input from either the Alberta Teachers' Association or the Alberta School Trustees' Association. In reality, Alberta Education said one thing and did another: it asked for input, but it did not appear to use it in the formulation of the policy actions.

The concerns raised at the Minister's Forum served to consolidate the issues that had been expressed previously by individual stakeholder groups. The Forum provided the opportunity for the stakeholder groups to express their concerns with a "loud" unified voice. The Minister of Education and Alberta Education could not avoid hearing the volume of their expression. The stakeholders were quite clear in communicating the message that all was not well with the new graduation requirements. At issue was both the substance of the new graduation requirements, including the dual diploma structure, as well as the overall implementation strategy.

There was evidence that Alberta Education incorrectly conceptualized the issue of the dual diploma issue. Mitroff (1983) stresses the importance of the problem structuring phase of policy making as being essential to solving the right problem. The critical issue according to Dunn (1981) is determining how well substantive and formal problems correspond to the original problematic situation and adequately represent its complexity. He cautions policy makers against "choosing the wrong worldview, ideology or myth to conceptualize a problematic situation" or "choosing the wrong formal representation of the substantive problem" (p. 109). Ideally, competent problem structuring will result in solving the actual problem. "Errors of the third kind" (p. 109), result from ineffective problem structuring and result in failing to solve the problem, or solving the wrong problem.

Several elements common to ill-structured problems were present in the policy problem of the dual diploma requirements. First, many stakeholders perceived themselves as being part of the decision-making process. Second, the values of stakeholder groups were in conflict, and third, prior to the Minister's Forum, there was a lack of consensus as to which policy actions would best achieve the goals. Dunn (1981, p. 105) maintains that the most important public policy problems are ill-structured because they involve high levels of conflict among competing stakeholders. He goes on to indicate that, when dealing with ill-structured problems, there are no generally agreed upon societal values, only those of particular groups and individuals.

In addition to the notion that policy problems are often wrongly conceptualized, MacKay (1990) suggests that many problems in the public sector are really interconnected sets of problems "for which solutions are not readily available and which, worst of all, are not fully understood by policy makers and analysts as messes of problems" (p. 2). Mitroff refers to them as "wicked problems" (1983). The data in this study indicate that the issue of the dual diploma structure is a wicked problem that Alberta Education failed to recognize, or chose to ignore, and as a result, the policy activities that were subsequently initiated failed to solve the "real" problem.

To whom then, did the government and Alberta Education listen regarding the dual diploma structure? In maintaining the dual diploma structure, did the Alberta Education officials who introduced two diplomas prior to the advent of the secondary education policy, act on their own values and use the component of community support that supported their actions as justification for the policy action? Dunn (1981) provides an insight that may be helpful in answering these questions. He indicates that, when dealing with ill-structured problems, "policy makers tend to maximize their own values and are not motivated to act on the basis of societal preferences" (p. 106). Furthermore, he suggests that

> policy makers and policy analysts are frequently unable to predict the range of positive and negative consequences associated with each policy alternative. This tends to result in the choice of courses of action that differ only marginally from the status quo. (p. 106)

Dunn's conceptualization may help to explain why Alberta Education chose to continue to support the government's policy on secondary education and maintain the dual diploma structure while disregarding the opinions of key stakeholder groups.

The Minister's Forum had the impact of providing summative information about the progress of the secondary education policy implementation. It is not clear whether Alberta Education expected the type of feedback it received and was using the forum as an opportunity to formalize concerns that it was beginning to suspect, or whether they really believed, as one delegate observed, that the forum participants would accept the Deputy Minister's "all is well" speech and endorse the policy actions taken to date. In any case, the participants were successful in communicating a wide variety of concerns to both the Minister of Education and Alberta Education. Shortly after the Forum, the Minister acknowledged in his address to the 1990 Alberta School Trustees' Convention that, although the secondary education policy had been approved in 1985, thousands of graduating students had hardly benefited from the changes the policy envisaged (Dinning, 1990b, p. 3). His statement clearly showed a lack of confidence in the policy action taken to implement the secondary education policy.

Forum delegates successfully communicated the negative impact of the dual diploma requirements on Alberta students and forced Alberta Education to re-examine the issue. In all likelihood, the dual diploma structure will be eliminated as recommended by the forum stakeholders. In June of 1991, Alberta Education circulated a two-page letter to school superintendents and principals outlining a single diploma structure with opportunities for students to earn specializations in one of eight areas of study (Alberta Education, 1991). Stakeholder reactions were requested and it appears that, in due course, Alberta students will be able to present a basic standard of required courses together with optional credits to receive a standard high school diploma.

Initially, stakeholder groups dealing through one-on-one relationships with Alberta Education were not able to affect the policy actions they desired. It was only through their joint, albeit spontaneous, efforts at the Minister's Forum that they were able to effectively communicate their concerns about the dual diploma requirements and move Alberta Education to reconsider that aspect of the policy.

## Chapter Summary

The data in this study indicated that community groups in Alberta were effective in bringing about changes to policy actions in the science program and re-evaluation of the dual diploma structure of the new high school graduation requirements. The community groups were not average parents or citizens. They were composed of individuals who had expertise in the areas they were challenging generally by virtue of their post-secondary education, but also by virtue of their career positions. Although the actions of each group were very different, they were successful in both forcing a re-examination of their particular causes and bringing about changes to the policy actions.

In the conflict regarding the science program, science professionals held firm convictions about the issue of how science courses should be structured and the nature of the course content. Their assumptions about the composition and structure of appropriate science courses for high school students were substantially different from the assumptions about science courses made by Alberta Education. Members of the science community were passionate and persistent in communicating their beliefs to the Minister of Education and Alberta Education through an effective and planned lobby. The group worked cooperatively to develop a strategy to pressure the Minister and Alberta Education to change the new science program structure and content. Using the traditional political techniques of identifying a wide spectrum of allies and mounting a concerted effort to express its discontent to politicians and bureaucrats, it was successful in achieving a substantial component of its goal.

In contrast, the action of advocates of a single graduation diploma was not deliberately planned. It evolved spontaneously during a special one-day forum organized by the Minister of Education to assess progress in implementing the secondary education policy. Educational stakeholder-participants, given the opportunity, were vocal in articulating their negative experiences with the implementation structure and strategies of the new graduation requirements, especially the dual diploma structure. The clarity and conviction of their arguments were able to convince the Minister and Alberta Education of the need to re-examine the policy actions including the dual diploma structure.

The data in this study have provided examples of how two community groups were influential in changing educational policies that were not in keeping with what they believe are the best interests of students. The changes were achieved in very different ways: the only factor common to each group was the strength of their conviction.

# CHAPTER 8

# SUMMARY, CONCLUSIONS, AND REFLECTIONS

This chapter links the effects of the implementation of the new graduation requirements with the understandings and beliefs held by various actors involved in developing and implementing the policy, and draws conclusions about the process of changing the high school graduation requirements in Alberta. The particular perspectives of the various stakeholder groups involved in implementing the new graduation requirements are used to explain why the various actors and stakeholders responded differently to the same policy. This study was an implementation analysis that provides historical documentation of changes to the high school graduation requirements in Alberta and enhances the understanding of policy change in the educational setting. More specifically, the study was designed to describe and explain the implementation of the new graduation requirements as a policy initiative of the *Secondary Education in Alberta* policy (Government of Alberta, 1985) in a selected school and school district in the province of Alberta.

The chapter begins with a summary of the problem statement and methodology and is followed by a concise review of the findings of the study with reference to the specific research questions. The second section analyzes the findings in terms of the policy implementation perspectives described in the review of the literature (Chapter 2), discusses the findings, and draws conclusions. In the final section, the researcher reflects on the implications for policy implementation in educational settings and makes recommendations for future study.

## Problem Statement

The purpose of this study was to examine the implementation of the new graduation requirements as a policy initiative of the *Secondary Education in Alberta* (Government of Alberta, 1985) policy. The questions "what happened, how, and why" were asked to develop an understanding of the retrospective, current, and prospective aspects of putting the policy into practice. The first part of the study examined the macro level of policy development, that is, how the administering agency, Alberta Education, transformed the secondary policy into the action plan that became the new senior high school graduation requirements. The second aspect of the study investigated the implementation actions at the micro and intermediate levels as they evolved at the school, district, and community levels from the perspectives of stakeholders involved in the process. This component of the study analyzed the interaction of each of these stakeholder groups among themselves, with the Minister of Education and Alberta Education, and describes the outcomes and effects of the change.

## Methodology

The design of this research study can be characterized as a case study using a naturalistic perspective. The data were collected from three sources: interviews, questionnaires, and the analysis of relevant documents. Interviews with individuals associated with Alberta Education, the selected school district, the selected school, and stakeholders in the community were conducted over the period beginning in November 1989 and continuing through to December of 1991. Questionnaires were completed by teachers, selected students, and their parents or guardians in the case study school. Document data sources included government and school district documents, press reports, correspondence, stakeholder briefs, and reaction papers. A pilot study was conducted in November and December of 1989 to test the interview questions, the questionnaires for parents, students, and teachers, and develop the researcher's interviewing skills.

A modified version of Fullan's 15 factors affecting implementation were used as the basis for analyzing data (1982). Data establishing the characteristics of the change were derived from a review of documents and processes affecting senior high school graduation requirements in Alberta between 1983 and 1991, and interviews with key actors at Alberta Education. The synthesis of this data established the evolution of the new graduation requirements and facilitated the development of a chronology of events relating to the innovation. Alberta Education officials associated with the development of the policy initiative validated the accuracy of the chronology and interpretation of the proceedings.

The data for the interviews and questionnaires were analyzed according to the Concerns Based Adoption Model (CBAM) of an innovation (Hall, 1979) and Fullan's (1982) factors affecting implementation. The findings were further analyzed and explained from three policy implementation perspectives: classical-control, political-interactive, and cultural-adaptive. MacKay's work (1990) in analyzing policy processes in Alberta Education structured the discussion of the findings of the study.

## Summary of Findings

The findings are summarized and discussed briefly with respect to the research questions outlined in the first chapter.

### Research Questions

The research questions generated data about those factors that Fullan (1982) suggests have "produced enough evidence for us to be fairly confident about what factors have the most influence" (p. 55) in implementing change. The major factors are organized into four main groups: the attributes of the change itself, the characteristics of the school district, the characteristics of the school, and factors external to the school system. The research questions were structured according to the first three categories, with the last category incorporated into the third category. The initial findings of the study revealed that external factors were significant in the implementation, and additional interviews were conducted to determine how the outside influences affected the changing of the graduation requirements.

The objective of the first set of questions was to document the evolution and nature of the new graduation requirements in Alberta by examining various government documents and interviewing the key actors who were involved in developing the policy. These questions are found in Chapter 1, page 12. The second set of questions focused on collecting data about the school district factors including the resources, administrative and organizational structures, and the environment that influenced the implementation. Five questions, beginning on page 12 of Chapter 1 were investigated. A third series of questions relating to implementation at the school level established the meaning various site-based actors held about the changes, and their subsequent actions to put them into practice. These questions are found on page 13 of Chapter 1.

Characteristics of the change. Fullan presents four aspects of the change itself that have been found to influence subsequent implementation: need, clarity, complexity, and quality and practicality of the program. The findings relating to the nature of the policy change are organized and discussed according to the questions posed.

1. *How was the Senior High School Graduation Requirements and Program Development Update (February, 1988) structured from the Secondary Education in Alberta policy (1985)?*

In structuring the problem of how to transform the secondary education policy into practice, Alberta Education used the legal authority of the *Secondary Education in Alberta* (Government of Alberta, 1985) policy statement to develop a rational, phase-in schedule for changes to the new graduation requirements. Alberta Education failed to acknowledge the policy-making principle articulated by Fullan (1982, p. 79) that implementation makes further policy. Theorists such as Dunn (1981) and Fullan (1982) conceptualize the policy process as a complex cyclical procedure that begins with problem structuring (Dunn, 1981, p. 103). The data collected for this study did not provide evidence of Alberta Education's efforts to assess the nature of the policy problem associated with changing the high school graduation requirements. There seemed to be a sense of security in the notion that, since an elaborate public consultation process had been utilized to determine the secondary education policy, and since the new graduation requirements were rooted in that policy, there was no need to initiate another round of policy making.

Alberta Education's conduct in changing the graduation requirements presumed that the policy problem was well-structured and that implementing the new requirements was a linear process. In reality, this study determined that changing the graduation requirements was a complex, ill-structured problem fraught with the conflicting values of many stakeholder groups; in other words, a mess of problems, or what Mitroff (1983) and MacKay (1990) refer to as "wicked problems." There are no easy answers for resolving these types of problems. Mitroff (1983) proposes two approaches to reach a solution: involvement of stakeholders in the problem-structuring process, that is, the use of multidisciplinary participation, and dialectical argumentation to examine the various elements, interpretations, and concerns of the problem.

The data provide evidence that both the problem-structuring and the policy-development phases of determining the new graduation requirements were internal Alberta Education activities with only limited stakeholder participation. It was only after Alberta Education had determined the basic structure of the graduation policy that stakeholders were invited to examine the proposed requirements and give their reaction. Although stakeholder input was requested and received, the evidence suggests that Alberta Education incorporated only a minor element of the feedback into the final policy document on the new graduation requirements.

The effect of stakeholder's input was limited. Dunn (1981) suggests that the decision makers' preferences prevail and, although Alberta Education made minor adjustments in the final document, by and large the overall structure of the new graduation requirements remained unchanged. Although Alberta Education maintained that the involvement of stakeholders was a consultative process, the data show that the primary motive for employing this process was to disseminate information and familiarize stakeholders with the new requirements. The consultative process appears to have been used by Alberta Education as a means of applying a "gloss of rationality" (MacKay, 1990, p. 3) to their bureaucratic decision-making process.

The government's secondary education policy statement reaffirmed previous Alberta Education policy and practice pertaining to diploma examinations and the dual diploma structure. A second mandate of the policy statement, raising of the passing grade from 40% to 50%, was implemented in September of 1986. All three of these policy practices were incorporated into the proposed policy on graduation requirements. The graduation requirements met with mixed reaction from Alberta stakeholders. Some elements, for example, raising the passing grade and the CALM course, received general stakeholder approval. Other elements, notably the proposed science program and the dual diploma structure, were actively opposed.

*2. What assumptions were made? What was taken for granted?*

Alberta Education made several assumptions about the implementation of the new graduation requirements. The first was that the changes in the requirements, if presented in the form of regulations, would demand compliance from both the school and the district. The results of the study show that this assumption held because the sanction, that is, not providing the necessary opportunities for students to earn graduation diplomas, was unacceptable to the students, the school, and the school district. Furthermore, based on past experience with regulatory, top-down mandates, Alberta Education took it for granted that high schools throughout the province would implement the mandated changes as scheduled.

A second assumption made by Alberta Education during the structuring of the policy problem was that the new graduation requirements were a well-structured problem and, thus, the changes could be implemented utilizing a detailed action plan established through a linear, rational, well-structured process. As the policy statement on secondary education had involved broad stakeholder participation and, because the policy was a government mandate, Alberta Education assumed that there was general acceptance of the policy statement, and, therefore, the new graduation requirements could be implemented according to the classical-managerial model of implementation. It appeared that because the new graduation requirements evolved from a government policy, Alberta Education took it for granted that this also represented the will of the stakeholders.

A third assumption made by Alberta Education was that it would be capable of evaluating existing courses and developing new courses and the related resources within the time frame established for implementation. For some programs, this assumption held. However in other areas, for example, science, unanticipated events delayed the development of curricula and resources.

The fourth, and perhaps most critical assumption made by Alberta Education relates to the *relationship* role of stakeholders in the development of the new graduation requirements policy. Alberta Education assumed that it had identified the broad range of stakeholders and furthermore, that it was also capable of assessing the stakeholders' assumptions regarding the new graduation requirements. Furthermore, they assumed that the participation of stakeholders in the problem structuring phase of the policy development was unnecessary.

3. *What was the nature of the new graduation requirements?*
   a. *How was the implementation strategy structured into the policy initiative?*
   b. *What are the primary features of the implementation strategy?*

The new graduation requirements increased the number of required courses and established two distinct diplomas for Alberta students: an Advanced Diploma to meet the needs of 30% of students with academic ability, and a General Diploma to meet the needs of 60% of students with average ability. The changes to the requirements introduced a new course, CALM, as well as new streams of courses in social studies, math, and science. The specialized courses in science at the grade 10 level were replaced by a general science course.

The primary strategy for implementing the new graduation requirements was to mandate the changes through a phase-in schedule. Time lines detailing the changes over a three-year period were developed for each of the diploma programs detailing the course changes and the implementation dates. The findings of this study concur with those of Bosetti (1990). In adopting the classical top-down management model of implementation, Alberta Education assumed that mandating the graduation requirements through regulations would be an effective means for gaining acceptance, and, furthermore, understanding the mandate would lead to implementation. Alberta Education produced a student-focused program planning booklet and a video to familiarize stakeholders and implementers with the new requirements, and distributed these widely as a component of the implementation strategy. However, there was no specific inservice program designed for assisting districts and schools with the implementation as it was assumed that school district and school site officials could learn about the new mandate by reading the high school handbook and complying with the new regulations. Minimal provision for consultation with implementers was provided through the regional offices. The implementation strategy focused primarily on defining the technology of the innovation; efforts to address the meaning of the proposed changes to the individuals affected by the changes were almost nonexistent.

4. *Were stakeholders involved in the process? How?*

Stakeholders were invited to participate in the policy process after Alberta

Education had more or less established the new requirements through the *Proposed Directions for Senior High School Programs and Graduation Requirements* (Alberta Education, 1987a) position paper. The input of stakeholders had only a minimal effect in determining the final version of the graduation requirements. Inviting stakeholder participation seems to have had two goals: first, to ensure that Alberta Education had not overlooked some major barrier to the proposed changes and second, to encourage stakeholders to become familiar with the new requirements in preparation for adoption.

### 5. *Would there be provision for mutual adaptation during implementation?*

Prior to the date on which the new graduation requirements became effective, Alberta Education maintained a firm stance in refusing to consider changes to the new regulations. Once the policy was in practice, however, the data indicate that there was a more flexible attitude towards resolving concerns as they emerged. The data in this study confirm the findings of Haughey and Rowley (1991) that "change is never static or complete; everyone in not always in agreement" (p. 8). The new graduation requirements in Alberta have undergone incremental changes from the time they were initiated. This has had both positive and negative effects. On the positive side, Alberta Education was willing to make adjustments, as needed, to reflect the reality of the implementation. On the other hand, the negative effect was that it created a state of perpetual confusion and uncertainty because administrators, in particular, were never absolutely certain about what was "in" and what was "out."

As the policy moved into the implementation stage, there was a definite shift from the previous top-down, management-control model for development and planning to the interactive-political model of adjusting the policy to meet the realities of practice. The restructuring of the Category "C" options, the re-examination of the science program, and the challenge to the dual diploma structure are examples of the political negotiation that took place between Alberta Education and stakeholder/implementers. As stakeholders identified obstacles and concerns to implementation, the Minister and Alberta Education established a set of bargaining points that enabled the development of mutually acceptable solutions.

*6. Would the policy be monitored during implementation? How?*
Initially, Alberta Education did not establish formal plans for monitoring the policy. Alternatively, it examined quantitative data including student enrollment patterns, credits and diplomas awarded, together with feedback from informal communication networks to monitor the implementation process.

In the fall of 1990, the Minister convened a conference for a broad base of stakeholders. The conference agenda included an assessment of progress in implementing the secondary education policy, identifying problems, and proposing solutions. The conference identified many issues and proposed several solutions including moving toward a single graduation diploma, increasing the distinction between the two diplomas, and increasing choices within a diploma program.

*7. What are the prospects for institutionalization?*
The prospect for institutionalization of some components of the new graduation requirements such as the diploma examinations, the 50% passing grade, the CALM course, the second stream of social studies, and the newly revised science program seem positive. The CALM and social studies courses have been implemented and consensus regarding the content and structure of these programs seems to have been achieved. The likelihood of the fundamental dual diploma structure being institutionalized is uncertain. Given the negative reaction from various stakeholders and Alberta Education's development paper on a single graduation diploma, further changes are expected in the near future.

District level factors affecting implementation. The second component of the study focused on investigating school district level factors affecting the implementation. Fullan (1982) characterizes these factors as being the history of innovative attempts, the adoption process, central administrative support and involvement, staff development and participation, timeline and information systems, and board-community characteristics. The following questions were investigated:

*1. How was the policy diffused to the micro level?*
The school district forms what Scheirer (1981) labels the intermediate level, the organizational subunits and the processes that carry out the daily work activities. The primary strategy used by Alberta Education to inform the

district about the changes to the graduation requirements was official communiques and department documents. To some extent, informal discussions among school district and Alberta Education officials, and later among senior members of the school district, structured the meaning that the district held about the changes. The district prepared briefs in response to various Alberta Education documents. On some issues, the district and Alberta Education were in agreement: however, the responses generally provided negative feedback and offered constructive suggestions for policy alternatives.

*2. What incentives were offered for adoption?*

The incentives offered for adoption of the new graduation requirements were not overt. They tended to appeal to a set of educational ideals, such as providing an excellent standard of education, ensuring that all students were challenged through programs that met their needs, and, most of all, that students received appropriate recognition, that is, a diploma upon meeting the requirements. The school district received special grants to purchase resources and provide professional development activities during the mandatory year of implementation for each new and revised course.

*3. How did the environment, the institutional setting, and the individuals involved affect the implementation process?*

The River City School District operates on a decentralized decision-making model, and the district's schools were expected to comply with government and district regulations in the organizing for program delivery. During the preparation of briefs responding to Alberta Education's proposals, the school district established its own position regarding the new requirements, and, since the district's position was in opposition to that of Alberta Education, the district was not especially committed to the official requirements. Nothing was done to deter the implementation; neither was it promoted with enthusiasm. The district did not develop its own specific implementation plan for the changes to the graduation requirements. The implementation schedule and process mandated by Alberta Education guided the district's implementation.

In specific subject areas, program consultants maintained communication liaisons with Alberta Education consultants and curriculum personnel to keep abreast of evolving developments. The district consultants were involved in piloting various new programs and providing inservice opportunities related to the new curricula for high school teachers. Communication between the district and its high schools tended to exist between subject area consultants and department heads, and superintendents and school-based administrators. The department head then informed the principal of impending program changes, and specific implementation plans were developed at the school level.

4. *To what extent did exogenous factors, such as political, economic, and/or social conditions affect the change process?*

There were substantial differences of opinion between the school district and Alberta Education regarding the future direction for secondary education and, subsequently, the new graduation requirements. The district believed that Alberta Education's efforts to improve the effectiveness of education were based on *intensification efforts* (Fullan and Stiegelbauer, 1991, p. 7). It was the district's opinion that these improvements should be brought about through *restructuring efforts.* The district believed that Alberta Education had missed a major opportunity to initiate significant innovation to secondary education and, as a result, did not develop a strong commitment to implementing reforms that it did not particularly value. Alberta Education and the school district failed to develop a common, shared meaning of the secondary education policy and the changes to the high school graduation requirements. This limited the support and effort that the district was prepared to make in transforming the policy into action.

5. *What are the expectations regarding continuation?*

The district tended to be pessimistic about the top-down strategies adopted by Alberta Education for implementing the secondary education policy and the new graduation requirements. The district implemented the requirements not so much because it believed that the outcomes would be positive for its students, but because it had no choice. The district did not have any particular commitment to the 1988 version of the high school graduation requirements and would certainly have preferred other alternatives, especially with respect to the dual diploma structure.

Factors affecting implementation at the school level. The action site for educational policy implementation is the school. Fullan (1982) identifies the characteristics at the school level as being the principal, teacher-teacher relations, and teacher characteristics and orientations as being major factors affecting implementation. Furthermore, due to the nature of policy implementation in this study, students and their parents have been included as factors relevant to the implementation. Answers to the following questions were sought through interviews and questionnaires:

1. *What strategy did the school employ to implement the policy initiative?*

The changes to the graduation requirements were communicated to staff as an information item during a regular meeting in the spring of 1988. Teachers also learned of the changes from their consultants at the district office and the Alberta Teachers' Association. In general, the school did not develop an overall plan to introduce the changes. Instead, the school administration accepted its role as subordinates in the implementation process and chose to follow the Alberta Education phase-in time line by incorporating it into various school initiatives. The school administration adopted a top-down strategy in implementing the policy within the school.

The school's strategy was to communicate the changes to incoming students through print materials including a school registration booklet and the Alberta Education booklet, *A Credit to Yourself* (1989a). In addition, there were various meetings with students and counsellors at junior high feeder schools and an open house for students and parents. Students at the school were quite knowledgeable about the new requirements, but almost two-thirds of their parents admitted to being unfamiliar with them.

2. *To what extent has the policy been implemented, that is, what is the level of use (LoU) of the policy mandate?*

In spite of a feeling of apathy towards the new graduation requirements, the policy was implemented in the school as required by the Alberta Education mandate. It is more likely that this occurred because the sanction of not providing opportunities for all students to earn a high school diploma was unacceptable to the school, rather than because it was committed to the changes. Efforts were made to acquire the necessary resources to facilitate the delivery of each new course as it came on stream. The LoU data from interview sources confirmed that the changes were being put into effect. The SoC data from teachers questionnaires' indicated that teachers were in the very early stages of concern about the changes. Even though the changes were being implemented, teachers were generally oblivious to the changes.

Although teachers were given opportunities to attend district inservice activities, there was insufficient lead time to permit the development of understanding and building of commitment to the new courses. As is typical in top-down implementation models, policy implementers--in this study teachers, students, and parents--passively accepted the changes and complied with the policy maker's expectations. Some teachers were suspicious of the validity of the secondary education review and were ambivalent about the new graduation requirements.

*3. What have been the major impacts on the school?*

To this point in time, the new graduation requirements have not had a significant effect at the school level. Administrators, teachers, students, and parents were generally resigned to accepting whatever was imposed from the hierarchy.

The major effects of the imposition of the changes to the graduation requirements were felt primarily by the people involved in the implementation. The school's administrative organization changed slightly, enrollment patterns shifted away from option courses to core-academic courses, and financial resources were reallocated to acquire new curricula and resource materials. Although a trend for students to spend four years in high school was emerging, the Advanced Diploma phenomenon was only one of many factors contributing to this effect. Among the faculty and students, the researcher sensed an almost contemptuous attitude toward the policy development process used by Alberta Education and the resulting feelings of powerlessness to determine their own fate.

*4. What policy instruments*
   *a. facilitated the process of change?*
   *b. inhibited the process of change?*

Perhaps the most powerful policy instrument that facilitated implementation was the regulatory nature of the policy and its sanction. Alberta Education's very powerful legal authority forced the school to implement the changes. From a historical perspective, students, parents, and teachers were accustomed to Alberta Education's responsibility for establishing the graduation requirements, so traditionally, they were conditioned to accept whatever was mandated. It is highly unlikely that Meadowview High School would have chosen to implement the changes voluntarily because it had no particular interest or commitment to changing graduation requirements that it had not participated in developing and that its district did not fully support.

Some of the lesser policy instruments that facilitated the change process were the official publications issued by Alberta Education. These included the phase-in schedule, the student information booklet, and various curriculum documents. District consultants and the school administration facilitated the initiation of new courses through their decision-making support.

Perhaps the greatest barrier to implementation was the failure of Alberta Education to work with implementers to develop a common shared meaning of the changes. Alberta Education appeared to be insensitive to the realities of the school-level administrators, teachers, and students. The individuals affected by the change did not have adequate opportunities to build commitment to the change. Minor difficulties related to resource deficiencies, feelings of frustration from option teachers, reassignment of option teachers out of their subject specialization, and frustration regarding the curriculum in social studies and science contributed to lack of enthusiasm for the policy.

5. *What levels of support are being demonstrated by various stakeholders?*
    - *a. administrators*
    - *b. teachers*
    - *c. students*
    - *d. parents*

Administrators, teachers, students, and parents were generally indifferent to the new graduation requirements. The changes did not generate feelings of enthusiasm or excitement. Instead, the changes were accepted as impositions, one more thing schools are being forced to do. Administrators incorporated the changes into the school's program to ensure that students would be able to achieve the diploma requirements. Teachers' support for the changes were divided; there was no consensus about whether the changes would be beneficial for students. Students, as subordinates in the policy process, accepted the requirements; whereas, the majority of parents were not even aware of that changes were being implemented. Fullan and Stiegelbauer indicate that "in general, teachers and others have become skeptical about the purposes and implementation support for educational change" (1991, p. 74).

6. *What is the perception of fidelity to the mandate? What is the perception of the extent to which this innovation*

*is achieving the goals of the mandate and those of the secondary education policy?*

Some of the changes to the graduation requirements have been implemented according to the original regulations as specified by Alberta Education, others have not. At an administrative level those changes that have been implemented have a high degree of fidelity to the mandate. This study did not determine the degree of change in classroom practice.

Although the new graduation requirements have been put into practice at Meadowview High School, there is no consensus on whether the changes are achieving the goals of the secondary education policy. Some components of the policy are working well at the case study school, for example, CALM, math programs, and the 50% passing grade. Other components, including the "C" options, the originally proposed science program, and some complementary courses, especially the vocational programs, have experienced enrollment and curriculum difficulties. Even though the required courses are being offered at Meadowview High School, this study found that the new graduation requirements have achieved limited success.

7. *Have exogenous factors affected the implementation process? Which ones? How?*

Since the public had been given a major role in the development of the *Secondary Education in Alberta* policy (Government of Alberta, 1985), and since Alberta Education has not traditionally involved the public in translating policy into action plans, there was no provision for further public input regarding implementation. This omission had far-reaching negative effects on the implementation process. Exogenous factors created great dissonance with respect to the proposed changes and acted as powerful barriers to the implementation. Although they were not directly involved in the change process as implementers, their concerns about the basic directions and goals of the new requirements and the power of their lobbying efforts have given the Minister of Education and Alberta Education cause to re-think the original structure of the changes to the graduation requirements. Science teachers and professors were instrumental in bringing about significant changes to the proposed academic stream of the science curricula. At the same time, educational stakeholder leaders communicated concern and consensus about the preliminary negative outcomes of the dual diploma structure to the policy makers.

*8. What are the expectations regarding continuation?*
The expectations regarding continuation vary depending upon the policy component under consideration. Some aspects of the changes, for example, CALM, the second stream of social studies, the new math program, and the 50% passing grade are well on their way to being institutionalized. Others components including the general science and the specialized science program, have undergone major restructuring and are in the process of being reintroduced. Still other components, and perhaps the most significant ones including the diploma structure and the number of specified credits, are under review.

Once implementation began, a phenomenon somewhat akin to mutual adaptation became evident. Prior to implementation, Alberta Education was reluctant to adjust the new requirements by acknowledging the beliefs of educational stakeholders. However, once implementation began and difficulties emerged, there was a greater willingness to consider and adjust the requirements to facilitate program delivery. Whereas the initial implementation model used a top-down approach, the model shifted to a political-bargaining model as barriers to implementation increased. Educational stakeholders and stakeholders external to the education system were successful in negotiating with Alberta Education to redefine some of the policy actions and affect the likelihood of successful implementation.

## Conclusions

### Discussion of Results

The real question to be asked is, has actual implementation occurred? This concept is what Fullan and Stiegelbauer (1991) refer to as "whether or not there has been a *real* change in practice" (p. 18). In the sense that there have been changes to the organization for program delivery, the data gathered in this study indicate that the answer to this question is a qualified "yes." The data did not establish the extent to which changes in the teaching-learning process are being implemented through the specific curricula of the new programs.

The administrative components of the new graduation requirements are being implemented as required. The school district's expectations were that the school would implement the requirements, and the school made every effort to ensure that students were complying with the regulations by offering the required courses and encouraging students to complete them. Teachers are teaching the required new courses but the extent to which they have changed their teaching strategies to comply with the new courses was not ascertained by this study. However, this study also found that the implementation proceeded in spite of a general lack of implementer commitment to the policy. The implementation occurred because schools are required to "teach the courses of study and education programs that are prescribed, approved, or authorized pursuant to the School Act" (1988, p. 13), and not because educators were convinced that the outcomes would be beneficial to students.

Legally, Alberta Education has the authority to grant credits and set the requirements for high school graduation in the province and this authority was used to mandate the new requirements. This factor provided the mental set for schools to accept the regulations imposed on them and implement them as best as they could, relying on Alberta Education to clarify certain regulations as required. In using this top-down implementation model, policy makers assume the role of superordinates, and policy implementers assume the role of subordinates in the implementation process. Although Alberta Education had the legal power to force the implementation of the changes to the graduation requirements, it does not have the power to force implementers to commit themselves to the changes. As McLaughlin points out, "Policy cannot mandate what matters: what matters most are local capacity and will" (1989, p. 9). She adds that the presence of the will or motivation to embrace policy objectives or strategies is essential to generate the effort and energy necessary to a successful project. Without the commitment of implementers, the change is less likely to be successful. This study has shown what is likely to happen: people go through the implementation motions without any serious effort to bring about meaningful change.

The question of whether belief will follow practice, that is, implementers will develop belief in the changed requirements after they have practised them, was not resolved through this study. McLaughlin (1989) suggests that when individuals are required to change their routines or follow new practices, they can become "believers." Change is a time-dependent process and, although the new requirements had been in effect for a relatively short period of time when this study concluded, the probability that belief will follow practice is somewhat remote. The evidence indicates that the lack of commitment and apathy towards the new graduation requirements on the part of teachers, parents, students, and administrators as well as the school district is unlikely result in developing support for the changes.

The findings of this study highlight what Fullan and Stiegelbauer (1991) identify as the problem of *meaning* in educational change. The fact that the Government of Alberta has a policy on secondary education, and Alberta Education has mandated a process to achieve the policy goals, does not guarantee what will happen in practice. Although the government attempted to involve citizens as educational stakeholders in the development of the policy, some Albertans were not in agreement with the secondary education goals or how to achieve them. Dunn (1981) classifies situations involving many decision makers whose values are in conflict, the prospect for alternatives is unlimited, and the outcomes are unknown as being ill-structured problems. Mason and Mitroff (1981) argue that in these types of situations all stakeholders should be involved in the problem-structuring phase of policy development. MacKay suggests that dialectical argumentation and multidisciplinary approaches be used "as the cognitive and procedural tools for dealing with the numerous aspects and varying interpretations of the problem" (1990, p. 2). In structuring the new graduation requirements, Alberta Education failed to provide meaningful opportunities for dialectical argumentation and multidisciplinary approaches. Therefore, the process was not followed through to creative resolution. In dealing with complex problems, these processes are essential to building meaning and ownership into the policy making process.

Related to the meaning of change is the degree of change that is proposed. Sarason (1991) categorizes innovations as being first- and second-order changes. First-order changes are aimed at improving the quality of current practice by improving their efficiency and effectiveness. These type of changes are alternatively referred to by Fullan and Stiegelbauer (1991) as being changes designed to intensify existing organizations and structures, using a "fix it" strategy. First-order changes are more likely to be implemented successfully because the basic organizational features remain essentially undisturbed. Second-order changes, on the other hand, develop new goals, structures, and roles in such ways as to alter the basic organizational features. Restructuring roles and reorganizing responsibilities affect the culture and structure of schools and are more likely to fail, because they tend to be adapted or sloughed off, allowing the organization to remain the same (Cuban, 1988). The changes to the graduation requirements were deemed by the River City School District as being first-order changes, and using this interpretation, the implementation was likely to be successful because the basic organizational structure, that is, credits, Carnegie Units, and core courses, remained relatively unchanged.

A comparison of the perception of the new graduation requirements from the viewpoint of the school district with those of Alberta Education suggest that each group attached different meanings to the change and, further, that school district officials were expecting second-order changes whereas Alberta Education offered only first-order changes. Fullan and Stiegelbauer (1991) maintain that the challenge of the 1990s is to deal with more second-order changes designed to affect the culture and structure of schools.

The role of the school district is critical for determining change in practice. Fullan and Stiegelbauer point out that "general support or endorsement of a new program has very little influence on change in practice" (1991, p. 74). Unless central administrators demonstrate active support for a change by visiting schools, and following through on decisions, teachers are unlikely to take the change seriously. The district in this study was not especially committed to the changes prescribed in the new graduation requirements and, while they showed general support for the changes, there was no evidence of the district's active support for the implementation at the school.

Louis (1989) describes two basic dimensions of school improvement policy strategies based on the expectation for uniform results and the need for uniform procedures. She goes on to suggest that, if the goal is to structure uniform results through the use of uniform procedures as was the situation with the implementation of the new graduation requirements, an implementation strategy such as the one developed by Alberta Education

> may be most effective in settings with a clear and relatively narrow program, and a smoothly functioning hierarchical

> organization in which initiatives from the top are likely to be understood and agreed with at lower levels. (p. 154)

When these criteria are not met, implementation strategies may fail to "stick" (p. 145) at the school level. The new graduation requirements did not meet these criteria: the program changes were widespread and the lower levels did not entirely agree with the mandated changes. As a result, Alberta Education has acknowledged that the 1988 graduation requirements as originally mandated, are not likely to reach the continuation stage.

Turnbull (1984), in reviewing the important lessons research has learned from the implementation of policy initiatives, suggests that policy initiatives are known to give rise to local adaptation and intergovernmental bargaining that may impede implementation. Although this particular study did not find substantial or significant evidence of site-specific adaptation, several examples of negotiation and bargaining emerged. Changes to the regulations, especially with respect to the Category "C" courses and changes to the structure and content of science programs, were brought about through the lobbying power of stakeholder groups.

The general conclusion of this study is that the changes to the new graduation requirements were an ill-structured problem. Alberta Education introduced the changes on the assumption that there was widespread consensus of the need for the changes and the nature of the required changes. The policy implementers accepted the tradition and legal authority of the policy maker to establish graduation requirements and attempted to put the mandated changes into effect within their school. Technical implementation difficulties forced Alberta Education to make initial revisions to the mandate. Lobbying efforts and negative feedback regarding outcomes from stakeholders external to the implementation process required the intervention of the Minister of Education to seek adaptation of the science program. Stakeholders also raised objections to the dual diploma structure, and discussions about its future are ongoing.

The findings of this study contribute to the understanding of what went "right" and what went "wrong" in changing the high school graduation requirements in Alberta. The following generalizations summarize the findings of this study:

1. Alberta Education used its legal authority as the policy maker to force implementation of the new graduation requirements.

2. Changing the graduation requirements was really a series of innovations or changes, many of which ill-structured in nature and arose because of conflicting values held by various educational stakeholders.

3. The classical/control model of policy implementation adopted by Alberta Education to change the graduation requirements was inappropriate given the ill-structured nature of the policy problem.

4. The failure to identify a broad base of relevant stakeholders and provide them with opportunities for meaningful input during the developmental stages of the policy development led to difficulties and delays during the actual implementation stage.

5. Some stakeholders disagreed with the vision stated in the secondary education policy and believed that Alberta Education did not consider their viewpoints in developing the new graduation policy.

6. Without the opportunity to participate in the policy development, the school district and other key stakeholder groups did not build the ownership or commitment essential for the support of the policy during the implementation phase.

7. Stakeholders have been successful in negotiating many changes to the new graduation policy since it was mandated in the fall of 1988.

8. The communication strategies used by Alberta Education, the River City School District, and Meadowview High School were not successful in making parents aware of the changes to the graduation policy.

9. Students can provide meaningful input into the development of the graduation policies that determine their high school programs.

10. Communication strategies and inservice programs that would enable teachers and administrators to develop a shared meaning of the new policy and build commitment to the changes were deficient in implementing the changes to the graduation policy.

11. Developing a rational implementation plan and using official documents to communicate the new graduation requirements was not effective in building understanding and commitment to the changes.

12. The concept of the Advanced Diploma has been plagued with difficulties: it has been controversial, misunderstood, and unsuccessful in

achieving the goals it was designed to achieve.

13. Institutionalization of some elements of the changes are likely. The raising of the passing grade from 40% to 50%, the diploma examinations, and the CALM course were widely accepted features of the graduation policy that were not controversial and have been fully implemented.

14. Institutionalization of the two-diploma structure is unlikely.

## Implications for Educational Policy Making

Based on the conclusions reached in this study, the following concepts confirm planned change theory and have implications for future policy implementation:

Problem structuring. The critical issue for policy makers is to accurately structure the problematic situation. Failure to do so is almost certain to solve the wrong problem, delay the resolution of the original problem, and result in the expenditure of valuable resources. Involvement of stakeholders in both the problem-structuring and policy-development processes are approaches that promote success in policy implementation. Conflict and disagreement, while seemingly counterproductive, actually provide opportunities for developing shared meaning and commitment to the changes by virtue of the negotiated interaction among the key actors.

Development of shared meaning. Fullan and Stiegelbauer (1991, p. 5) suggest that "solutions must come through the development of *shared meaning*" [their italics]. If changes in practice are to be effected, then implementation strategies must enable the implementers to develop their own understandings of the changes. While it is necessary for implementers to understand the technology of the change, it is also necessary to enable them to develop a shared meaning for the changes. As Fullan and Stiegelbauer suggest, innovation is multidimensional (p. 37). The three aspects of change, materials, teaching approaches, and alteration of beliefs, represent the means of reaching a particular set of educational goals. Change in practice must occur along each of these dimensions in order to affect the outcome. In fact, Fullan and Stiegelbauer suggest "that changes that do not include changes on these dimensions are probably not significant changes at all" (p. 38).

Limitations of classical/control model. The classical/control model of policy implementation results in limited implementation. Although powerful sanctions and legal requirements may force implementers to put the policy into action, external stakeholders not subject to the sanctions and legal authority of the policy makers, have the potential to act as powerful barriers to implementation when their concerns are not being addressed. The identification and involvement of key external stakeholders is critical to ensuring their support of the policy mandate.

Multiple realities. The reality of teachers is not the reality of educational policy makers and, to the extent that each is ignorant of the subjective world of the other, the changes will fail (Fullan & Stiegelbauer, 1991). Teachers tend to be present oriented (Lortie, 1975), whereas policy makers tend to be future oriented. Fullan and Stiegelbauer (1991) point out that there is a strong tendency for people to adjust to change by changing as little as possible. Furthermore, they state that "educational change is a process of coming to grips with the *multiple* [their italics] realities of people who are the main participants in implementing change" (p. 95). The implementation strategy must appreciate the realities of the various actors charged with bringing the changes into effect because, in the final analysis, it is the actions of individuals that determine the actual changes. The need for the changes, together with changes that teachers believe are relevant to addressing the perceived needs, are important factors contributing to teachers' changes in practice. Change requires learning, and, therefore, appropriate professional development opportunities are needed to enable teachers to develop new meanings regarding the changes and what they mean to their practice of teaching.

Pressure and support. Fullan and Stiegelbauer suggest that both pressure and support are necessary for success (1991). To balance the pressure to implement that occurs when changes are legally mandated, the regulating agency must demonstrate active support for implementers to facilitate success. While Alberta Education as the policy regulator provided support for the implementation through additional financial allocations to assist with resource acquisition and inservice programs at the district level, the implementers at the school level seemed unaware of this support.

Complexity of change. Policy making and policy implementation are complex and dilemma-ridden processes. They are not linear, rational processes, and there is no fool-proof method of determining the best implementation strategy. Successful educational change acknowledges the multiple realities of the key actors in implementing the change and establishes quality relationships between policy makers and policy implementers. Planning can fail when policy makers fail to identify and confront situational constraints, values, ideas, and experiences of implementers and stakeholders (Fullan & Stiegelbauer, 1991).

## Implications for Future Research

A number of issues related to the implementation of the *Secondary Education in Alberta* policy (Government of Alberta, 1985) and the ensuing changes to the high school graduation requirements have been raised as a result of this study. They provide opportunities for further investigation and research.

Establishing the educational effects of the policies. The development and adoption of a new policy is not without cause. The intent of changing the graduation requirements was to enable students to achieve the goals of the secondary education policy. This study has focused on the structure and implementation of the innovation, specifically the changes to the graduation requirements. It did not attempt to analyze the policy itself or the educational outcomes of the policy. Further study needs be conducted into the effects of the changes upon students, that is, to what extent are students achieving the goals of the secondary education policy? This type of investigation could be either quantitative or qualitative in nature. For example, Alberta Education data could be used to determine the effect of the changes to the graduation requirements on dropout rates, program continuation in core course sequences, number of graduates, test results, diplomas awarded, etc. Alternatively, in a naturalistic mode, a follow-up study with high school students, both those who successfully attained their diplomas and those who did not, could determine how students regarded the adequacy of their high school education. A further study evaluating the outcomes of the secondary education policy and the changes to the graduation requirements would seek to answer these questions.

The school/district relationship as a factor in the change process. This study has found that implementation occurred in spite of a passive relationship between the school and its district regarding the graduation requirements. Further study into the kinds of relationships between schools and their districts is needed to determine how the policy implementation success can be maximized, that is, an examination of the balance between engagement and bureaucratization that would lead to successful implementation.

Comparative policy making at Alberta Education. Alberta Education is currently restructuring the vocational education, industrial education, business education, and home economics programs under the umbrella of Career and Technology Studies. The model in use for developing this program more closely resembles the dialectical argumentation and multidisciplinary approaches recommended by Mason and Mitroff (1981). A study detailing this policy making model and comparing it to past policy making processes of Alberta Education would inform policy makers about the particular merits of various policy development and implementation models in Alberta.

A critical analysis of the role of stakeholders in policy making. Who should determine the goals of education and programs of study in Alberta? The current Minister of Education suggests that Albertans should decide. What does this mean? Is this appropriate? What role should educators, politicians, students, and the community play in determining educational policy? This study found that factors external to the education system, initially political forces and ultimately community factors, were more influential in effecting change than educational factors. A critical examination of the role of stakeholder groups in the development and establishment of educational policy would inform understanding of the current practices and establish recommendations for future practice.

## Reflections on Policy Making and Policy Implementation

School level officials interpreted the changes to the graduation requirements as being regulations that were "non-negotiable." Graduation requirements are well-established instruments of provincial policy in Alberta, and there is little room for discretionary local deviation. School and district level bureaucrats had no leeway to inject their own interpretations and adaptations into the requirements. The sanction, namely, failure of school-leaving students to receive a high school diploma, was simply too unacceptable for schools to ignore the new requirements.

## The Process of Determining the Changes

Dunn's theory of problem structuring is useful in explaining the genesis of the problem-structuring error that occurred in the establishment of the new graduation requirements (1981). Dunn advocates commencing the process by defining the nature of the problematic situation, that is, the diffuse worries that were being raised by political pressure groups about unfavorable trends and social indicators, and only secondarily addressing problem solving. Successful problem-structuring requires creative examination of the problematic situation using techniques that are novel, and perhaps, unconventional, although still valued, to formulate the problem itself. Once the substantive problem has been conceptualized, the more formal and specific problem may be constructed. Dunn cautions against using mathematical terms as representations for substantive problems because they tend to be inappropriate for ill-structured problems. Alternatively, he advocates focusing on determining the nature of the problem itself.

In developing the new graduation requirements, Alberta Education conceptualized the policy problem using the prevailing societal solution to the unacceptable student performance problem, that is, raising the standards and focusing on basic academic courses to improve student achievement. At issue then, was how well the substantive and formal problems of defining the new graduation requirements corresponded to the original problematic situation. The perception of "poor" student performance was, in fact, a series of interrelated and complex problems that led Alberta Education to formulate the wrong substantive and formal representation of the problem.

Could Alberta Education have anticipated the complications that were to arise because the problematic situation was structured inaccurately? Likely not. Although several of the stakeholder groups pointed out possible difficulties, Alberta Education ignored or minimized their observations. The policy implementation model adopted for changing the graduation requirements was basically the classical top-down model that assumed legal authority of the policy maker was strong enough to influence successful implementation. Additionally, using MacKay's words (1990), Alberta Education attempted to apply a "gloss of rationality" (p. 3) to the surface of the policy process making it appear that a consultative process had taken place when, in fact, bureaucrats had predetermined outcomes in mind prior to undertaking the so-called consultative process.

Planned change theorists have long emphasized the fact that change is a process, not an event. Timing is a crucial element in the change process. From this perspective, the new graduation requirements were introduced as a series of events that were to occur over a period of time without any specific plan to link other important elements in the change process with the "events" outlined in the phase-in schedule. Regulatory, sequential planning is typical of the top-down implementation model and often fails, as was the case in this study, because of the difficulty of predicting the behavior of stakeholders and actors. An approach that involved interaction between policy makers and policy implementers would facilitate the "process" component of change as well as enable the development of ownership and commitment to the change itself.

The switch to the political bargaining model of implementation began only after the implementation had officially begun. It did not appear as if Alberta Education intended to use the negotiation/bargaining model initially, but was forced to do so as a reaction to emerging difficulties including the structure of the Category "C" options, the elimination of the specialized grade 10 science courses, the introduction of the general science stream, and the on-going challenges to the dual diploma structure. Alberta Education was put into the position of reacting to change instead of leading change. Louis and Miles suggest that "the blending of top-down and bottom-up participation is often characteristic of successful multilevel reforms" (1990, p. 83). Although it is not possible to predict with complete accuracy how implementation will proceed, the likelihood of greater success in changing the graduation requirements could have been enhanced if Alberta Education had provided opportunities for dialectical argumentation and multidisciplinary participation from the outset.

The data in this study suggest that changing the graduation requirements in Alberta resulted in a Type III implementation outcome (Fullan & Stiegelbauer, 1991), that is, one in which the change is actually implemented in spite of the questionable value and technical quality of the change. Fullan and Stiegelbauer suggest that "even if a certain idea is valued because of its goal direction, it may not be sufficiently developed and tested to be practically usable" (p. 18). They go on to indicate that "far too many innovations, even those with laudable goals, have been rushed into practice without a clear notion and the corresponding resources related to how they could be used in practice . . . [because] the technical requirements or means of implementation have been underestimated" (p. 18). Due attention to structuring the initial problematic situation could have prevented this problem.

### The Characteristics of the Change

At the time the diploma requirements were changed, American society was concerned with the poor performance of its students on both national and international rating scales. Society was concerned about many things: keeping kids in school, increasing the graduation rates, raising performance levels, raising literacy levels, preparing students to enter the work force, and ensuring that individual students had the opportunities to develop their capabilities. The general public used buzz words such as "back to the basics" and "excellence" as strategies for resolving the dilemma. The public outcry for better performance and higher achievement was heard by politicians who responded by enacting legislation that increased the rigor of graduation requirements by increasing performance standards and specifying additional course work. This phenomenon occurred in many of the American states and several Canadian provinces. In Alberta, the review of secondary programs was a government initiative that resulted in the government's secondary education policy (Bosetti, 1986). The changes to the graduation requirements evolved from that policy and, according to Alberta Education officials, were influenced by government, that is, political forces.

Generally, educational stakeholders believed that the changes to the graduation requirements addressed all students as if they were both academically talented and bound for university and post-secondary institutions. In spite of Alberta Education's attempt to address the individual capabilities of students through the dual diploma structure, key actors and stakeholders tended to think of the changes only in terms of the Advanced Diploma requirements. There was a general belief that the Advanced Diploma was a "better" diploma, and, therefore, it became the norm. The General Diploma was either regarded as being inferior, or was ignored. The researcher was very conscious of the tendency of interviewees to discuss the changes to the graduation requirements primarily from the Advanced Diploma perspective. Certainly these effects were not in keeping with Alberta Education's intentions. They constituted a misinterpretation of the policy intent and are examples of how individuals develop their own meanings for changes. If the implementation strategy had provided sufficient opportunity for key stakeholders and actors to develop a shared, common meaning of the new graduation requirements, this problem could have been avoided.

It is ironical that the dual diploma structure, that was intended to recognize the differing capability levels of students, in fact created its own set of problems. Students and parents perceived the Advanced Diploma as the most desirable of the diplomas. The perceptions associated with the Advanced Diploma led less capable students to challenge the standards established for academically capable students and resulted in poor performance, failed courses, the need to repeat courses, and increased dropout rates. At the same time, Alberta Education appeased political and public pressure groups by pointing out the increased rigor and higher standards of the Advanced Diploma. In general, key actors acted as if the General Diploma program did not exist.

While the reform movement of the mid-1980s advocated the need to include more rigor in the requirements, the general feeling was that Alberta Education had gone too far in mandating academic courses and thereby creating an unbalanced program of studies. The high proportion of mandatory courses required for the Advanced Diploma was the most contentious issue of the *Proposed Directions* paper. Most educators supported the strengthening of the graduation requirements; however, there was a belief that the new standards were too rigorous. While the changes were praised because they would provide a better grounding in the core subjects, there was also concern that concentrating on those four areas would not result in a broad based education. The increased number of specified courses also reduced students' opportunities to select the subject areas that they enjoy learning about. From their research on high schools, Louis and Miles conclude that "creating high expectations for students will probably have little impact unless the quality of the teaching learning process is also confronted, or the meaning of being a student is changed" (1990, p. 41). Furthermore, although there was a belief that the requirements might produce graduates who were more literate, there was a concern that they would be "narrower" graduates, and not particularly better citizens. The basic concern about the Advanced Diploma requirements was that they contradicted the secondary education policy principle that advocated a broad general education as being the best preparation for a changing society. These differences of opinion regarding the essential components of a high school education prevented the development of a commitment to the changes among implementers and stakeholder groups. Each of these factors contributed to the conflict regarding relevance, that is, the practicality and need for the changes to the graduation requirements as defined by Alberta Education. Detractors of the new requirements, forced to implement a change they were not committed to, continued to express their concerns. The Minister's Forum on Secondary Education provided an opportunity for consolidating the dissent and communicating apprehension to the Minister and Alberta Education.

Fullan and Stiegelbauer stress that although the implementation process is complex and dilemma ridden (1991) "the more factors supporting implementation, the more change in practice will be accomplished" (p. 67). They cite four insights as having importance in bringing about change:

1. active initiation and participation,
2. pressure and support,
3. changes in behavior and beliefs, and
4. the overriding problem of ownership.

This study has found that the factors supporting implementation of the changes to the graduation requirements were limited. Given the current climate for stakeholder involvement in public policy making, the legal authority of bureaucratic policy makers alone does not guarantee full and successful implementation.

Significant changes are not likely to occur without active initiation and, therefore, Alberta Education's role in establishing the new graduation requirements was essential. However, the role of key stakeholders and actors was found to be wanting in this policy implementation. Louis and Miles suggest that "commitment to an educational change often comes about through involvement in planning or decision making for change" (1990, p. 42). Involvement of this nature builds the multi-level ownership needed for transforming a policy into action and also has the potential of changing the beliefs and behavior of implementers. At the same time, they acknowledge the need for outside pressure such as mandates from the district or state to stimulate the change.

Fullan and Stiegelbauer also recognize the importance of both pressure and support in the change process and warn of the problems of having one without the other: "Pressure without support leads to resistance and alienation; support without pressure leads to drift or waste of resources" (1991, p. 91). In the final analysis, according to Fullan and Stiegelbauer, "it is the actions of individuals that count" (1991, p. 77). Such has been found to be the situation in this study. Individual stakeholders and actors successfully prevented implementation of certain aspects of the new graduation requirements. For example, in reaction to the negative input from the science community, Alberta Education established a multidisciplinary approach to structuring the problem and developing an acceptable and appropriate solution. This strategy appears to have been successful in building commitment to a mutually acceptable change to the science program that is likely to result in implementation.

The findings of this study demonstrated how the relationships among policy makers, administrators, practitioners, and stakeholders, both in the development and implementation of policy, affected outcomes. Furthermore, the use of policy as an instrument of reform as shown in this case study, exacerbated the differences among the policy makers, administrators, practitioners, and exogenous stakeholders resulting in mixed success for the reform of the high school graduation requirements. Educational policy making cannot be dominated by any one group. Success in educational reform and restructuring is more likely to be the result of collaborative, interdependent efforts among politicians, Alberta Education, administrators, teachers and the community.

# REFERENCES

Alberta Catholic School Trustees' Association. (1987). *Response to Alberta Education's 'Proposed directions for senior high school programs and graduation requirements.'* Edmonton: Author.

Alberta Education. (1982). *1982-83 Junior-Senior high school handbook.* Edmonton: Author.

Alberta Education. (1983). *1983-84 Junior-Senior high school handbook.* Edmonton: Author.

Alberta Education. (1984a). *1984-85 Junior-Senior high school handbook.* Edmonton: Author.

Alberta Education. (1984b). *Alberta education management and finance plan information package.* Edmonton: Author.

Alberta Education. (1984c). *Grade 12 diploma examinations program.* Vol. 4, No. 2. Edmonton: Student Evaluation Branch Bulletin.

Alberta Education. (undated, circa, 1985). *Review of secondary programs: Report of the Minister's Advisory Committee. Foundation for the future.* Edmonton: Author.

Alberta Education. (1986). *1986-87 Junior-Senior high school handbook.* Edmonton: Author.

Alberta Education. (1987a). *Proposed directions for senior high school programs and graduation requirements.* Edmonton: Author.

Alberta Education. (1987b). *82nd annual report, 1986-1987.* Edmonton: Author.

Alberta Education. (1988a). *Senior high school graduation requirement and program development update, February, 1988.* Edmonton: Author.

Alberta Education. (1988b). *1988-89 Junior-Senior high school handbook.* Edmonton: Author.

Alberta Education. (1989a). *A credit to yourself: Planning your high school program.* Edmonton: Author.

Alberta Education. (1989b). *A credit to yourself: Planning your high school program.* Edmonton: Author. (Video).

Alberta Education. (1989c). *Guide to education: Senior high handbook, 1989-90.* Edmonton: Author.

Alberta Education. (1989d). *Who decides what students should learn in school and how?* Edmonton: Author.

Alberta Education. (1989e). *Infocus.* February. Edmonton: Author.

Alberta Education. (1989f). *Infocus.* May. Edmonton: Author.

Alberta Education. (1989g). Press Release. CD: 89 10 13 (ARO07220). Edmonton: Author.

Alberta Education. (1990a). *Guide to education: Senior high handbook, 1990-91.* Edmonton: Author.

Alberta Education. (1990b). *Infocus 3*: 1. Edmonton: Author.

Alberta Education. (1990c). *Proceedings: Minister's forum on secondary education policy implementation.* Edmonton: Author.

Alberta Education. (1990d). *Secondary education in Alberta: A policy implementation status report.* Edmonton: Author.

Alberta Education. (1990e). Press release. CD: 90 01 26. Edmonton: Author.

Alberta Education. (1991). *A single high school diploma with specialization: An alternative for consideration.* Edmonton: Author.

Alberta School Trustees' Association. (1988). *Report of the secondary education task force.* Edmonton: Author.

Alberta Teachers' Association. (1985). *Response to "Review of secondary programs, Reports of the Minister's Advisory Committee."* Edmonton: Author.

Alberta Teachers' Association. (1987). *Comments on "Proposed directions for senior high school programs and graduation requirements."* Edmonton: Author.

Alberta Teachers' Association. (1989a). *Survey on awareness of and concerns about the new High School Diploma Programs in the Province of Alberta.* Edmonton: Author.

Alberta Teachers' Association. (1990, January 1). Graduation requirements get general approval. *The ATA News.*

Alpern, M. (1986). *Cultural change in an inner city high school.* Unpublished doctoral dissertation, University of Alberta.

Andrews, H. A. C., (1987). *Curricular implementation of the Roy adaptation model.* Unpublished doctoral dissertation, University of Alberta.

Bardach, E. (1977). *The implementation game: What happens after a bill becomes a law.* Cambridge, Mass: The MIT Press.

Berman, P. (1978). The study of macro and micro implementation. *Public Policy 26* : 2: 157-184.

Berman, P. (1980). Thinking about programmed and adaptive implementation: Matching strategies to situations. In H. M.Ingram & D. E. Mann (Eds.), *Why policies succeed or fail.* Beverly Hills, CA: Sage.

Berman, P. (1981). Educational change: An implementation paradigm. In R. Lehming & M. Kane (Eds.), *Improving schools.* Beverly Hills, CA: Sage.

Berman, P. & Gjelten, T. (1984). *Improving school improvement: An independent evaluation of the California school improvement program, Vol. 2 Findings.* Berkley: Berman, Weiler Associates.

*educational change, Vol. I: A model of educational change.* Santa Monica, CA: Rand. R-1589/1-HEW.

Berman, P., & McLaughlin, M. W. (1976). Implementation of educational innovation. *Educational Forum 40:* 3: 345-370.

Berman, P., & McLaughlin, M. W. (1977). *Federal programs supporting educational change. Vol. VII. Factors affecting implementation and continuation.* Santa Monica, CA: Rand Corporation.

Berman, P., & McLaughlin, M. W. (1978). *Federal programs supporting educational change. Vol. VIII. Implementing and sustaining innovations.* Santa Monica, CA: Rand Corporation.

Bogdan, R. C., & Biklen, S. K. (1982). *Qualitative research for education: An introduction to theory and methods.* Boston: Allyn and Bacon, Inc.

Bohac, V. E. (1989a). *The Management and Finance Plan: A case study of public policy making in Alberta Education.* Unpublished doctoral dissertation, University of Alberta.

Bohac, V. (1989). Education policy making at the provincial level: Alberta's Management and Finance Plan. *The Canadian Administrator.29*: 1.

Bosetti, B. L. (1986). *The Alberta Secondary Education Policy, 1985.* Unpublished master's thesis, University of Alberta.

Bosetti, B. L. (1990). CALM: *A case study in curriculum implementation.* Unpublished doctoral dissertation, University of Alberta.

Boyer, E. L. (1983). *High school: A report on secondary education in America.* New York: Harper & Row.

Burrell, G., & Morgan, G. (1979). *Sociological paradigms and organisational analysis: Elements of the sociology of corporate life.* London: Heinemann.

Campbell, R. & Mazzoni, T. (1976). *State policy making for the public schools.* Berkeley, CA: McCutcheon.

Carney, T. F. (1972). *Content analysis: A technique for systematic inference from communications.* Winnipeg: University of Manitoba Press.

Carr, W., & Kemmis, S. (1986). *Becoming critical: Education, knowledge and action research.* London: The Falmer Press.

Corcoran, T. B. (1988). *Schoolwork: Perspectives on workplace reform in the public schools.* Stanford, CA: Center for Research on the Context of Secondary Teaching. CRC No. P88-105.

Cuban, L. (1988). A fundamental puzzle of school reform. *Phi Delta Kappan, 70* (5), 341-344.

Curriculum Corner: Senior high science. (1989, June 5). *The ATA News,* p. 2.

de Luna, P. (1989a, May 1). Alberta Education postpones senior high science programs. *The ATA News*, p. 3.

de Luna, P. (1989b, September 11). Committee to examine new science programs. *The ATA News*, p. 3.

Department of Educational Administration ADP Project Team '87. (1987). *Exemplary leadership: Four case studies.* University of Alberta, Edmonton: Author.

Dexter, L. A. (1970). *Elite and specialized interviewing.* Evanston, IL: Northwestern University Press.

Dinning, J. (1989). Correspondence with school board chairmen. April 5. Edmonton: Author.

Dinning, J. (1990a). Why change the curriculum? *The ATA Journal.* January-February 1990, p. 6-7.

Dinning, J. (1990b). Address to the 1990 Alberta school trustees' convention. Edmonton: Author.

Drake, E. L. (1984). Correspondence with Stuart L. Smith, Chairperson, Science Council of Canada. Charlottetown: Author.

Dunn, W. N. (1981). *Public policy analysis: An introduction.* Englewood Cliffs, N.J.: Prentice-Hall Inc.

Dye, T. (1981). *Understanding public policy.* Englewood Cliffs, New Jersey: Prentice Hall.

Edwards, G. C. (1980). *Implementing public policy.* Washington, D. C.: Congressional Quarterly Press.

Elliott, O. (1989, July 20). Show-tell science not good enough. *River City Journal*, p. A13.

Elmore, R. F. (1978). Organizational models of social program implementation. *Public Policy. 26:* 2: 185- 228.

Elmore, R. F. (1983). Complexity and control: What legislators and administrators can do about implementing public policy. In L. S. Shulman & G. Sykes (Eds.), *Handbook of teaching and policy.* New York: Longman.

Elmore, R. F. (1988). *Contested terrain: The next generation of educational reform.* Paper prepared for the Commission on Public School Administration and Leadership, sponsored by the Association of California School Administrators.

Elmore, R. F., & McLaughlin, M. W. (1988). *Steadywork: Policy, practice and the reform of American education.* Santa Monica, CA: Rand.

Elmore, R. F., & Associates. (1990). *Restructuring schools: The next generation of educational reform.* San Francisco: Jossey-Bass Publishers.

Fantini,M. (1980). *Community participation: Alternative patterns and their consequence on educational achievement.* Paper presented at American Educational Research Association annual meeting, 1980.

Firestone, W., & Rosenblum, S. (1988). *The alienation and commitment of students and teachers in urban high schools.* Washington, DC: Rutgers University, Centre for Policy Research in Education.

Ford Foundation. (1984). *City high schools: A recognition of progress.* New York City: Author.

Fullan, M. (1982). *The meaning of educational change.* Toronto: OISE Press.

Fullan, M. (1989, October). *What's worth fighting for in the school.* Paper presented at Western Canada Educational Administrators' Conference, Edmonton.

Fullan, M. (1990). *Developing a strategy for innovation and change.* (Audio tape). Alexandria, Virginia: Association for Supervision and Curriculum Development

Fullan, M., & Stiegelbauer S. (1991). *The new meaning of educational change.* Toronto: OISE Press.

Gay, L. R. (1987). *Educational research: Competencies for analysis and application.* 3rd ed. Columbus: Merrill Publishing.

Goodlad, J. (1975). *The dynamics of educational change.* Toronto: McGraw-Hill.

Goodlad, J. I. (1984). *A place called school: Prospects for the future.* New York: McGraw Hill.

Government of Alberta. (1985). *Secondary education in Alberta: policy statement.* Edmonton: Author.

Graduation requirements get general approval. (1990, January 29). *The ATA News*, p. 5.

Gross, N., Giacquinta, J., & Bernstein, M. (1971). *Implementing organization innovations: A sociological analysis of planned educational change.* New York: Basic Books.

Guba, E. G., & Lincoln, Y. S. (1981). *Effective evaluation: improving the usefulness of evaluation results through responsive and naturalistic approaches.* San Francisco, CA: Jossey-Bass Inc.

Guba, E. G., & Lincoln, Y. S. (1982). Epistemological and methodological basis of naturalistic inquiry. *Education, Communication, Technological Journal. (ECTJ) 30:* 4: 233-252.

Hall, G. (1979). The concerns-based approach to facilitating change. *Educational Horizons. 57.* 4: 202--209.

Hall, G., George, A. A., & Rutherford, W. L. (1986). *Measuring the stages of concern about the innovation: A manual for use of the SoC Questionnaire.* Austin, Texas: Southwest Educational Development Laboratory (SEDL). First published in 1979.

Hall, G., & Guzman, F. M. (1984). *Sources of leadership for change in high schools.* University of Texas at Austin: Research and Development Center for Teacher Education. R. & D. Report No. 3185.

Hall, G. E., & Loucks, S. F. (1982). Bridging the gap: Policy research rooted in practice. In A. Lieberman & M. W. McLaughlin (Eds.), *Policy making in education: Eighty first yearbook of the National Society for the Study of Education.* Chicago: University of Chicago Press.

Hargrove, E. (1975). *The missing link: The study of implementation of social policy.* Washington, DC: Urban Institute.

Haughey, M., & Rowley, D. (1991). Principals as change agents. *The Canadian Administrator. 30:* 8.

Heatherly, J. L. (1984). *Balcony people.* Austin, Texas: Balcony Publishing.

Hord, S. M. & Diaz-Ortiz, E. M. (1986). *Beyond the principal: Can the department head supply leadership change for high schools?* Paper presented to the International Research Seminar on Internal Change Facilitators: University of Leuven, Belgium.

Hord, S. M., & Murphy, S. C. (1985). The high school department head: Powerful or powerless in guiding change? In W. L. Rutherford, S. M. Hord, L. Huling-Austin, S. M. Stiegelbauer, S. C. Murphy, S. Putman, G. E. Hall, & D. Muscella (Eds.), *Research on the improvement process in schools and colleges.* Austin TX: The University of Texas at Austin: Research and Development Center for Teacher Education.

Hord, S. M., Stiegelbauer, S. M., & Hall G. E. (1984). How principals work with other change facilitators. *Education and Urban Society. 17*: 1: 89-109.

Huberman, M. & Miles, M. (1984). *Innovation up close.* New York: Putnam.

Huling-Austin, L., Stiegelbauer, S., & Muscella, D. (1985). High school principals: Their role in guiding change. In W. L. Rutherford, S. M. Hord, L. Huling-Austin, S. M. Stiegelbauer, S. C. Murphy, S. Putman, G. E. Hall, & D. Muscella (Eds.), *Research on the improvement process in schools and colleges.* Austin, TX: The University of Texas at Austin: Research and Development Center for Teacher Education.

Johnson, S. M. (1988). *The primacy and potential of high school departments.* Paper commissioned by the Center for Research on the Context of Secondary Teaching. Boston: Harvard University Graduate School of Education

Joyce, B. (Ed.). (1978). *Involvement: A study of shared governance of teacher education.* Syracuse, NY: Syracuse University.

LaRocque, L. (1983). *Policy implementation in a school district: A matter of chance?* Unpublished doctoral dissertation, Simon Fraser University.

LaRocque, L., & Coleman, P. (1989). Quality control: School accountability and district ethos. In M. Holmes, K. Leithwood, & D. Musella (Eds.), *Educational policy for effective schools* (pp. 168-191 ). Toronto: OISE Press.

Leithwood, J. A., & Montgomery, D. J. (1982). The role of the elementary school principal in program improvement. *Review of Educational Research. 52*: 3: 309-339.

Levin, H. (1976). Educational reform: Its meaning. In M. Carnoy & H. Levin (Eds.), *The limits of educational reform.* New York: McKay.

Lewin, K. (1951). *Field theory in social science.* New York: Harper & Row.

Lewis, A. (1989). *Restructuring America's schools.* Arlington, Virginia: American Association of School Administrators.

Lipsky, M. (1977). Standing public policy implementation on its head. In E. Bardach (Ed.), *The Implementation Game.* (p. 391-402). Cambridge, Mass: MIT Press.

Litke, C. D. (1989). *Measuring the levels of use of a cognitive education program.* Unpublished Master's Thesis, University of Alberta.

Lortie, D. (1975). *School teacher: A sociological study*. Chicago: University of Chicago Press.

Loucks, S., Newlove, B., & Hall, G. (1975). *Measuring levels of the use of the innovation: A manual for trainers, interviewers and raters.* Austin TX: Procedures for Adopting Educational Innovations Project: CBAM. The Research and Development Center for Teacher Education.

Louis, K. S. (1989). The role of the school district in school improvement. In M. Holmes, K. Leithwood, & D. Musella (Eds.), *Educational policy for effective schools* (pp. 145-167). Toronto: OISE Press.

Louis, K. S., & Miles, M. B. (1990). *Improving the urban high school: What works and why.* New York: Teachers College Press.

MacKay, D. A. (1990). Policy processes in Alberta Education: An analysis of four studies. *The Canadian Administrator 30:* 1.

Majone, G., & Wildavsky, A. (1979). Implementation as evolution. In J. Pressman & A. Wildavsky (Eds.), *Implementation.* Berkeley: University of California Press.

Majone, G., & Wildavsky, A. (1984). Implementation as evaluation. In J. L. Pressman & A. Wildavsky (Eds.), *Implementation. 3rd ed.* Berkeley, CA: University of California Press.

Martin, J., & Willower, D. The managerial behavior of high school principals. *Educational Administration Quarterly*, 1981, *17* (1), 69-90.

Mazmanian, D. A., & Sabatier, P. A. (1981). *Effective Policy Implementation.* Lexington, Mass: Lexington Books.

McLaughlin, M. W. (1976). Implementation as mutual adaptation: Change in classroom organization. In W. Williams & R. F. Elmore (Eds.), *Social program implementation.* New York: Academic Press.

McLaughlin, M. W. (1987). Learning from experience: Lessons from policy implementation. *Educational evaluation and policy analysis. 9:* 2: 171-178.

McLaughlin, M. W. (1989). *The Rand change agent study ten years later: Macro perspective and micro reality.* Stanford, CA: Center for Research in the Context of Secondary Teaching. CRC No. P89-108.

McLaughlin, M. W., & Marsh, D. D., (1978). Staff development and school change. *Teachers' College Record: 80*: 1: 69- 94.

Meade, E. Jr. (1979). Philanthropy and public schools: One foundation's evolving perspective. New York: The Ford Foundation.

Meadowview Composite High School. (1989). *Program planning guide 1989-90.* River City: Author.

Miles, M. B. (1979). School innovation from the ground up: Some dilemmas. *New York University Education Quarterly, XI*: 1: 2-9

Miles, M. (1987). *Practical guidelines for school administrators: How to get there.* Paper presented at American Educational Research Association annual meeting.

Mitroff, I. I. (1983). *Stakeholders of the organizational mind.* San Francisco: Jossey-Bass.

Mitroff, I. I., & Mason, R. O. (1981). *Creating a dialiectical social science: Concepts, methods and models.* Boston: D. Reidel Publishing Company.

Musella, D. F. (1989). Problems in policy implementation. In M. Homes, K. Leithwood, & D. Musella (Eds.), *Educational policy for effective schools.* Toronto: OSIE Press.

Nakamura, R. T., & Smallwood, F. (1980). *The politics of policy implementation.* New York: St. Martin's Press.

National Commission on Excellence in Education. (1983). *A nation at risk: The imperatives for educational reform.* Washington, DC: U. S. Government Printing Office.

O'Toole, L. J., Jr. (1986). Policy recommendations for multi-actor implementation: An assessment of the field. *Journal of Public Policy , 6:* 2: 181-210.

Owens, R. G. (1982). Methodological perspective: Methodological rigor in naturalistic inquiry: Some issues and answers. *Educational Administration Quarterly 18:* 2: 1-21.

Palmer, R. (1988). *Letter to superintendents of schools and junior and senior high school principals.* Alberta Education: Edmonton.

Palumbo, D. J., & Harder, M. A. (1981). *Implementing public policy.* Lexington, Mass: Lexington Books.

Physics Professor. (1988). Correspondence to the Director of the Curriculum Design Branch, Alberta Education.

Physics Professor. (1989). Open letter to "Friends." Edmonton: Author.

Physics Professors. (1988) Correspondence with Dr. J. P. Meekison, Vice-President, University of Alberta. Edmonton: Author.

Pisesky, S. R. (1989). *We are St. Joes: A survey about the students of St. Joseph Composite High School.* Unpublished paper. Edmonton: Author.

Popowich, G., & Prather, S. (1986). *Secondary Education in Alberta Policy Statement: Issues and implications for the senior high school program.* Unpublished paper. Edmonton: Author.

Pressman, J., & Wildavsky, A. (1973). *Implementation.* Berkeley: University of California Press.

Pressman, J., & Wildavsky, A. (1979). *Implementation.* Berkeley: University of California Press.

Radwanski, G. (1987). *Ontario study of the relevance of education and the issue of dropouts.* Toronto, ON: Ministry of Education.

Report of the Harvard Committee. (1945). *General education in a free society. Cambridge, Mass:* Harvard University Press.

Reinhard, D. (1980). *Great expectations: The principal's role in inservice needs in supporting change projects.* Paper presented at American Educational Research Association annual meeting, 1980.

River City School District. (1984). *Brief to Alberta Education: Review of secondary school programs.* River City: Author.

River City School Board. (1985). *Brief to Alberta Education: Reaction to review of secondary programs.* River City: Author.

River City School District. (1987). *Reaction to Alberta Education's Proposed Directions for Senior High School Programs and Graduation Requirements.* River City: Author.

River City School District. (1989). *Annual Report 1988-89: Education is everybody's business.* River City: Author.

River City School District. (1990). *Facts and stats.* River City: Author.

Roberts, A. D., & Cawelti, G. (1984). *Redefining general education in the American high school.* Alexandria, VA: Association for Supervision and Curriculum Development.

Rossman, G. B., Wilson, B. L., D'Amico, J. J., & Fernandez, N. T. (1987). *Pathways through high school: Translating the effects of new graduation requirements.* Maryland State Dept. of Education, Baltimore: U. S. Department of Education, Office of Educational Research and Improvement.

Rutherford, W. L., & Murphy, S. C. (1985). *Change in high schools: Roles and reactions of teachers.* R & D Rep. No. 3211. Austin, TX: University of Texas.

Rutter, M., Maughan, B., Mortimore, P., Ouston, J., & Smith, A. (1979). *Fifteen thousand hours.* London: Open Books.

Sabatier, P. A. (1986). Top-down and bottom-up approaches to implementation research: a critical analysis and suggested synthesis. *Journal of Public Policy 6:* 1: 21-48.

Sabatier, P., & Mazmanian, D. (1980). The implementation of public policy: A framework of analysis. *Policy Studies Journal. 8:* 4: 538-560.

Sarason, S. B., (1991). *The predictable failure of educational reform.* San Francisco: Jossey-Bass Publishers.

Scheirer, M. A. (1981). *Program implementation: The organizational context.* Beverly Hills, CA: Sage.

Scheirer, M. A., & Rezmovic, E. L. (1983). Measuring the degree of program implementation: A methodological review. *Evaluation Review. 7:* 5: 599-633.

Schlechty, P. C. (1990). *Schools for the twenty-first century.* San Francisco: Jossey-Bass Publishers.

*School Act.* (1988). Province of Alberta. Chapter S-3.1.

School Notes. (1990, April 23). *The Edmonton Journal*, p. B3.

Science Council of Canada. (1984). *Science for Every Student: Educating Canadians for tomorrow's world.* Ottawa: Author.

Shulman, L. S., & Sykes, G. (1983). *Handbook of Teaching and Policy.* New York: Longmans.

Sirotnik, K. (1983). What you see is what you get: Consistency, persistency, and mediocrity in classrooms. *Harvard Educational Review, 53,* 16-31.

Sizer, T. R. (1984). *Horace's compromise: The dilemma of the American high school.* Boston: Houghton Mifflin Company.

Smith, L., & Keith, P. (1971). *Anatomy of educational innovation: An organizational analysis of an elementary school.* New York: Wiley.

Stake, R. E. (1980). Study guide for seeking sweet water: Case study methods in educational research. (Audio tape and study guide). In R. M. Jaeger (Ed.), *Alternative methodologies in educational research.* Washington, DC: American Educational Research Association.

Stiles, S. (1989, February). *High School Diploma and the plight of the underachiever.* Unpublished paper delivered to the Edmonton Education Society, Edmonton: Author.
Symyrozum, L. E. (1990). *Comments on questions about the new graduation requirements.* Personal correspondence with the Researcher. Edmonton: Author.

Teachers cautiously approve new science curriculum. (1990, February 12). *The ATA News*, p. 1.

Turnbull, B. (1984). States propose, schools dispose: Prospects for state initiatives in quality improvements. *Education and Urban Society: 16:* 2: 207-224.

Tushman, M. L. (1977). Special boundary roles in the innovation process. *Administrative Science Quarterly 22:* 4: 587-605.

Van Horn, C. E., & Van Meter, D. S. (1977). The implementation of intergovernmental policy. In S. S. Nagel (Ed.), *Policy Studies Review Annual.* Vol. 1. Beverly Hills, CA: Sage.

Wellisch, W., MacQueen, A., Carriere, R., & Duck, G. (1978). School management and organization in successful schools. *Sociology of Education, 51,* 211-216.

Wildavsky, A. (1979). Implementation in context. In J. Pressman & A. Wildavsky (Eds.), *Implementation.* Berkeley, CA: University of California Press.

Wise, A., (1977). Why educational policies often fail: The hyperrationalization hypothesis. *Curriculum Studies, 9* (2), 43-57.

Wise, A., (1988). The two conflicting trends in school reform: Legislative learning revisited. *Phi Delta Kappan, 69* (5) 328-33).

Yin, R. K. (1984). *Case study research.* Beverly Hills, CA: Sage.

# APPENDIX A

# ALBERTA EDUCATION, DISTRICT, AND SCHOOL LEVEL, ADMINISTRATOR/DEPARTMENT HEAD, COVERING LETTERS, CONSENT AGREEMENT, AND INTERVIEW QUESTIONS

# RESEARCH PERMISSION LETTER

January 8, 1990

To Whom it May Concern:

Sharon Pisesky, Ph. D. Student from the Department of Educational Administration at the University of Alberta, is currently conducting a research project on 'Changing the Senior High School Graduation Requirements in Alberta.' To complete this study she will need to interview several key staff members of the_______________________________________ school district.

Approval has been given by our department for Sharon to conduct the interviews. Participation in the project is voluntary.

Sincerely,

Supervisor
Monitoring and Student Information

## SAMPLE OF INTERVIEW CONFIRMATION LETTER

Date

Dear ___________________

As a graduate student in the Department of Educational Administration, I am conducting research into the new high school graduation requirements as a component of the 1985 Secondary Education Policy in Alberta. The purpose of this study is to investigate effects of the implementation of these mandated changes in Alberta high schools. Your cooperation in sharing your insights, experiences and beliefs about the changes and their resulting impact on education will contribute to our understanding of the implementation of this policy and assist me to complete the requirements for my Ph. D. in educational administration.

The opportunity to discuss the new graduation requirements with you is sincerely appreciated. I would like your permission to audio record the interview to ensure that the data collected are both accurate and complete. Our meeting has been arranged for _______ on _______________. I am looking forward to learning about your perspectives of this important educational initiative.

Enclosed is a consent agreement that I would ask you to read in preparation for our meeting. If you have any questions or concerns a call for clarification would be welcome. Thank you for your willingness to contribute to this research study.

Sincerely

Sharon Pisesky
Phone: 436 4888 (residence)

# CONSENT AGREEMENT FORM: INTERVIEWEES

## Consent Agreement

Faculty of Education
Department of Educational Administration Letterhead

The study entitled, *Changing the Senior High School Graduation Requirements in Alberta*, is being conducted in accordance with the University of Alberta Guidelines on Ethics in Human Research with the approval of the Department of Educational Administration Research Ethics Review Committee. Participants in this study agree to be interviewed under the following conditions:

1. The participants will be fully informed of the nature and purpose of this study.
2. Participation is voluntary and potential participants are under no obligation to be interviewed. Participants may withdraw from the study as their circumstances warrant.
3. Interviewees are guaranteed anonymity. Names will be changed to protect the identities of persons and places.
4. Interviews will be audio recorded and interviewees will have the opportunity to examine transcripts of their interview tapes and make additions and deletions to ensure that the content accurately reflects their perception of the implementation of the new graduation requirements.
5. Permission of the participants will be sought to include specific quotations in the final report of the study.
6. Data that are included in the final report will not be harmful or embarrassing to the participants.

Please indicate your understanding of the above conditions and your agreement to participate in this study, by signing the consent form below.

Signature________________________________

Date________________________________

# SAMPLE INTERVIEW GUIDE

1. Are you using the new diploma requirements (NGR) in your school system?

2. What is your reaction to the NGR in terms of providing an adequate education to high school students?

3. I'm interested in anything you'll share with me about how you see the NGR affecting schools, staff, students, parents, etc.

4. Have you had any feedback from teachers, students, parents or the public re NGR?

5. How do you feel about the NGR (attitude)? From your perspective, what are the strengths of the NGR? Do you see any weaknesses in the NGR?

6. How are the NGR impacting on the way the school system operates?

7. I'm interested in the communication that has gone on about NGR. First let's talk about Alberta Education. Could you tell me about your communication with Alberta Education regarding NGR?

   Now let's talk about the high schools? Have you had discussions with high school principals re NGR? What has been the substance of these discussions?

   How about communication within the central office? For example, have associates, consultants/planners expressed their opinions to you? What has been the substance of their opinions? How about the school board? Do they have a stated position, either formally or informally?

   Has the ATA either the local or the provincial body been in touch to express their opinions? What were they?

8 Have you made any suggestions regarding adjustments to NGR? What? Why? To whom? Are you considering giving further input in the future? What future plans do you have in relation to the use of the NGR?

10. What do you see as being the long-range effects of the NGR? How have you reached these conclusions?

11. Are you doing any monitoring or evaluation of the NGR, either formally or informally?

## SAMPLE OF TRANSCRIPT VERIFICATION LETTER

Faculty of Education
Department of Educational Administration Letterhead

Date

Dear

Re: Changing the High School Graduation Requirements
Interview: ________________________________

As promised, I am providing you with a transcript of the above interview. I would ask you to review it to ensure that the content continues to accurately reflect your perception of the implementation of the new graduation requirements. Before you begin reading the transcript, may I remind you that our spoken language is generally more informal than our written communication. The tape has been transcribed accurately according to what was said and as such, the transcription is not likely to reflect our usual standards of written communication. Do not be overly concerned about informal usage, syntax and so on. Furthermore, be assured that I will obtain your permission before any quotation is included in the final report. At this time, please focus on the accuracy of the content by making deletions and corrections to ensure that the concepts reflect your understanding of the situation. Additional information and comments that will enhance my understanding of the effects of the changes may be included in the space to the right of the text.

Would you kindly return the transcript in the enclosed envelope to ________ by __________. Thank you for your cooperation. I am most appreciative of your participation in my study.

Sincerely

Sharon Pisesky

# DISSERTATION CHAPTER VALIDATION LETTER

_______________, 1991

Dear _______________________,

Re: Thesis, *Changing the High School Graduation Requirements in Alberta*

About 18 months ago, I interviewed you with reference to the above study for my doctoral dissertation. As promised in the participation/consent agreement, I am submitting a draft of the chapter pertaining to the characteristics of the new graduation requirements to you for verification. While several officials from Alberta Education were interviewed, you will note that the specific sources of interview data have been kept anonymous to comply with the spirit of the consent agreement.

I have included several of your quotations in this chapter and although I have endeavored to ensure through anonymity that they would not be personally embarrassing or harmful to you, I leave the final judgement to you. In reading through this draft I would ask you to comment on the following:

1. Is the information presented in the chapter factually correct? If not, would you please indicate areas where information is incomplete or incorrect.
2. May I have your permission to use quotations attributable to you in the final text of the dissertation? If you believe I have misquoted you or have changed your perspective on a particular issue, please suggest changes that would make the quotation acceptable.

You will note that the discussion of findings is incomplete, pending your confirmation of the preliminary analysis of the findings. If possible, could I receive your reaction prior to the middle of September? Please make your comments in the right hand column on the draft document, and return the chapter to me at the address above.

Thank you for your assistance. I expect to complete the dissertation by the end of the year and would be willing to provide Alberta Education with a copy if you believe it has merit.

Sincerely

Sharon Pisesky

## DISSERTATION VALIDATION LETTER: SCHOOL PRINCIPAL

August __, 1991

Dear ____________

Re: Thesis, *Changing the High School Graduation Requirements in Alberta*

About 18 months ago, I had several discussions with you regarding the above study for my doctoral dissertation. As promised in the participation/consent agreement, I am submitting a draft of the chapter pertaining to the implementation of the new graduation requirements to you for verification.

I have included several of your quotations in this chapter. Although they are attributable to the principal I have changed the name of the school to Meadowview High School and only three people (my advisor, you and I) are specifically aware of the actual name of the school. In the spirit of the participation/consent agreement, I endeavored to ensure that the data were reported in such as way as to prevent it from being personally embarrassing or harmful to you or your former school. However, I leave the final judgement to you. In reading through this draft I would ask you to comment on the following:

1. Is the information presented in the chapter factually correct? Have I been able to capture the implementation of the new graduation requirements as you understand them? If not, would you please indicate areas where my information and/or understanding is incomplete or incorrect.

2. May I have your permission to use quotations attributable to you in the final text of the dissertation? If you believe I have misquoted you or you have changed your perspective on a particular issue, please suggest changes that would make the quotation acceptable or suggest that it be deleted.

Your comments on my interpretation of the findings would also be most welcome. If possible, could I receive your reaction prior to the middle of September? Please make your comments in the right hand column on the draft document and return the chapter to me at the address above.

Thank you for your assistance. I sincerely appreciate your cooperation with my study.

Yours truly

Sharon Pisesky

# APPENDIX B

## SCHOOL LEVEL: TEACHER COVERING LETTERS AND QUESTIONNAIRE

## TEACHER QUESTIONNAIRE COVERING LETTER

Faculty of Education
Department of Educational Administration Letterhead

January 12, 1990

Dear Fellow Colleague

As a graduate student in the Department of Educational Administration I am conducting research into the high school graduation requirements as a component of the 1985 Secondary Education Policy in Alberta. The purpose of this study is to analyze the impact of the mandated changes. The findings of this study will provide Alberta Education and the school system with valuable feedback about the secondary education policy and the new diploma requirements in particular.

Students, teachers, parents and officials of the school, central administration, Board of Trustees and Alberta Education are sharing their insights, beliefs and experiences with respect to the new graduation requirements by participating in interviews and completing questionnaires. Your input as a teacher is especially meaningful in this study because of your strategic involvement at the implementation site. Your cooperation in answering this questionnaire openly and honestly will contribute to our understanding of the implementation of this policy. Some teachers may wish to provide additional information through an informal interview. A form indicating your interest in discussing the issues in more depth is included. Every effort has been made to guarantee participants' anonymity. No names or signatures are required and no codes for tracing participation have been used on the questionnaire. Data in the final report will be reported anonymously and all responses will be treated confidentially.

Would you kindly complete the questionnaire and return it to ________ in the main office by Friday, January 19. If you have any questions or concerns, I would welcome your call. A copy of the final report will be made available to the school upon its completion. Thank you for your cooperation.

Sincerely

Sharon Pisesky, Ph. D. Candidate
Phone: 436 4888 (residence)
492 3094 (university)

# TEACHER QUESTIONNAIRE
# ON
# HIGH SCHOOL GRADUATION REQUIREMENTS
# IN ALBERTA

## PART I: DEMOGRAPHIC INFORMATION

1. Gender:
    1 ______Male
    2 ______Female

2. Present educational assignment:

    1 _______classroom teaching

    2 _______counselling

    3 _______administration

3. If you have classroom teaching responsibilities, what subjects are you teaching at the present time? Please check the appropriate subject(s).

    _____science/chemistry/biology/physics

    _____math

    _____social studies

    _____English

    _____French or other languages

    _____physical education

    _____CALM

    _____practical arts (business education, home ec, industrial or voc. ed.)

    _____fine arts (art, music, drama)

    _____special education/special needs students

    _____other, what ______________________________

4. Years of teaching experience (including this year)?

    _____years

5. Years of teaching experience (including this year) at the high school level?

    _____years

## PART II: GENERAL INFORMATION ABOUT THE NEW GRADUATION REQUIREMENTS

6. Are you aware that a new set of graduation requirements for Alberta high school students is being phased in for grade 10 and 11 students?

1 _____yes
2 _____no

If no, please skip ahead to Part III, on page 6.

7. How did you learn about the new graduation requirements? Please check the appropriate responses and identify the type of information source.

a _____from the Alberta Education materials: e. g., *A Credit to Yourself*, policy statements, handbooks, guides.
Please identify the specific information source(s).

b _____from ATA documents such as newsletters, specialist council journals, magazines or circulars.
Please identify the specific information source(s).

c _____inservice or staff meetings and conferences e. g., school based, central office, Alberta Education, ATA.
Please identify the specific information source(s).

d _____other(s), please indicate:

8. How would you rate your understanding of the new graduation requirements? I understand them

1 ______thoroughly
2 ______generally
3 ______a little
4 ______not at all

9. What is your personal viewpoint regarding the new graduation requirements?

1 _____I completely approve
2 _____I approve with some minor concerns
3 _____I approve in general but have major concerns
4 _____I do not approve
5 _____I haven't decided
6 _____I have no opinion

10. What do you think the impact of the new graduation requirements will be on the quality of high school education?

1 _____increase quality
2 _____no difference
3 _____decrease quality
4 _____undecided
5 _____no opinion

11. What is your philosophical belief about the two-diploma (i.e. advanced and general diploma) system?

1 _____positive, i.e., you favor a two-diploma system
2 _____negative, i.e., you are not in favor of the two-diploma system
3 _____undecided
4 _____no opinion

12. How do you feel about raising the passing mark for earning credits from 40% to 50%?

1 _____positive, i.e., you favor it
2 _____negative, i.e., you are not in favor of it
3 _____undecided
4. _____no opinion

13. How do you feel about the number of compulsory courses/credits students must take to earn a diploma?

1 _____positive, i.e., you favor the increase
2 _____negative, i.e., you are not in favor of the increase
3 _____undecided
4 _____no opinion

14. How have you personally been affected by the new graduation requirements? Please comment. Use the reverse side if necessary.

15. Have you observed any changes in your school as a direct result of the new graduation requirements, e. g. changes related to students, teachers, subject areas. Please be as specific as possible. Use the reverse side if necessary.

16. The next series of questions ask about details of the new graduation requirements. For each item, please indicate if you are in favor, not in favor or have no opinion of the changes. A fourth category allows you to indicate that you are not familiar enough with the changes to comment.

a. the revised science curriculum

1 _____in favor
2 _____not in favor
3 _____no opinion
4 _____not familiar enough with the change to comment

b. the revised math curriculum

1 _____in favor
2 _____not in favor
3 _____no opinion
4 _____not familiar enough with the change to comment

c. the revised social studies curriculum

1 _____in favor
2 _____not in favor
3 _____no opinion
4 _____not familiar enough with the change to comment

d. the revised English/language arts curriculum

1 _____in favor
2 _____not in favor
3 _____no opinion
4 _____not familiar enough with the change to comment

e. the "C" option requirement ensuring that Advanced Diploma students complete a planned sequence of courses in languages, fine arts or practical arts

1 _____in favor
2 _____not in favor
3 _____no opinion
4 _____not familiar enough with the change to comment

f. the compulsory Career and Life Management course usually called CALM

1 _____in favor
2 _____not in favor
3 _____no opinion
4 _____not familiar enough with the change to comment

g. the distribution of credits among different subjects

1 _____in favor
2 _____not in favor
3 _____no opinion
4 _____not familiar enough with the change to comment

h. the time line for phasing in the changes

1 _____in favor
2 _____not in favor
3 _____no opinion
4 _____not familiar enough with the change to comment

PART III: CONCERNS ABOUT THE NEW GRADUATION REQUIREMENTS
This part of the questionnaire was adapted from an instrument developed by the Research and Development Center for Teacher Education, University of Texas at Austin. (Copyright clearance is pending.)

The purpose of this part of the questionnaire is to determine what teachers are concerned about regarding the new high school graduation requirements at various times during the implementation process. The items were developed from typical responses of school and college teachers who ranged from no knowledge at all about various programs to many years experience in using them. Therefore, *a good part of the items on this questionnaire may appear to be of little relevance or irrelevant to you at this time.* For those items that are completely irrelevant, please circle "O' on the scale. Other items will represent those concerns you do have in varying degrees of intensity, and should be marked higher on the scale. For example:

This statement is very true of me at this time
0 1 2 3 4 5 [✓ 6] or [✓ 7]
This statement is somewhat true of me now
0 1 2 [✓ 3] or [✓ 4] or [✓ 5] 6 7
This statement is not at all true of me at this time
0 [✓ 1] or [✓ 2] 3 4 5 6 7
This statement seems irrelevant to me.
[✓ 0] 1 2 3 4 5 6 7

Please respond in terms of your present concerns, and how you feel about your involvement with the implementation of the new high school graduation requirements. Please think of this change in terms of your own perceptions of what it involves. Remember to respond to each item in terms of your present concerns about your involvement or potential involvement with the new graduation requirements.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Irrelevant | | Not true of me now | | Somewhat true of me now | | Very true of me now | |

1. I am concerned about students' attitudes towards the new graduation requirements. 0 1 2 3 4 5 6 7

2. I now know of some other approaches that might work better. 0 1 2 3 4 5 6 7

3. I don't even know what the new graduation requirements are. 0 1 2 3 4 5 6 7

4. I am concerned about not having enough time to organize myself each day. 0 1 2 3 4 5 6 7

5. I would like to help other staff in their understanding of the new graduation requirements. 0 1 2 3 4 5 6 7

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Irrelevant |  | Not true of me now |  | Somewhat true of me now |  | Very true of me now |  |

|  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|
| 6. I have a very limited knowledge about the new graduation requirements. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I would like to know the effect of the new diploma requirements on my professional status. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I am concerned about the conflict between my interests and my responsibilities. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. I am concerned about revising the use of the new graduation requirements. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. I would like to develop working relationships with both our staff and outside staff about using the new graduation requirements. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. I am concerned about how the new graduation requirements affect students. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. I am not concerned about the new graduation requirements. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. I would like to know who will make the decisions under the new graduation requirements. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. I would like to discuss the use of the new graduation requirements. |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. I would like to know what resources are available to implement the new graduation requirements. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. I am concerned about my inability to manage all that the new graduation requirements demand. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. I would like to know how my teaching or administration is supposed to change. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. I would like to familiarize other departments or persons with the progress of the new graduation requirements. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. I am concerned about evaluating the impact of the new graduation requirements on students. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. I would like to revise the approach to the new graduation requirements. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

---

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Irrelevant | | Not true of me now | | Somewhat true of me now | | Very true of me now | |

---

21. I am completely occupied with other things. 0 1 2 3 4 5 6 7

22. I would like to modify our use of the new graduation requirements based on the experiences of our students 0 1 2 3 4 5 6 7

23. Although I don't know much about the new graduation requirements, I am concerned about things in the area. 0 1 2 3 4 5 6 7

24. I would like to excite my students about their benefits from the new graduation requirements. 0 1 2 3 4 5 6 7

25. I am concerned about time spent working with non-academic problems related to the new graduation requirements. 0 1 2 3 4 5 6 7

26. I would like to know what implementation of the new graduation requirements will demand in the immediate future. 0 1 2 3 4 5 6 7

27. I would like to coordinate my effort with others to maximize the effects of the new graduation requirements. 0 1 2 3 4 5 6 7

28. I would like to have more information on time and energy commitments required by the new graduation requirements. 0 1 2 3 4 5 6 7

29. I would like to know what other staff are doing in this area. 0 1 2 3 4 5 6 7

30. At this time, I'm not interested in learning about the new graduation requirements. 0 1 2 3 4 5 6 7

31. I would like to determine how to supplement, enhance or replace the new graduation requirements. 0 1 2 3 4 5 6 7

32. I would like to use feedback from the students to change the new graduation requirements. 0 1 2 3 4 5 6 7

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Irrelevant | | Not true of me now | | Somewhat true of me now | | Very true of me now | |

33. I would like to know how my role will change when we are using the new graduation requirements. 0 1 2 3 4 5 6 7

34. Coordination of tasks and people is taking too much of my time. 0 1 2 3 4 5 6 7

35. I would like to know how the new graduation requirements are better than what we had before. 0 1 2 3 4 5 6 7

**Concluding comments:** I am interested in any concerns or comments, both positive and negative, that you would share about your perception of the new graduation requirements.

Thank you for your assistance in completing this questionnaire. If you would like to discuss the new graduation requirements with me, I would be happy to arrange an informal interview. Please complete the following memo, detach it from this questionnaire and return it, separately, to the general office.

# INFORMAL INTERVIEW INVITATION

January __, 1990

Memo to: Sharon Pisesky

From: ________________________________

Re: High School Graduation Requirements Study

---

I am interested in sharing my perceptions regarding the new high school graduation requirements with you in an informal interview setting with the understanding that information I provide will be anonymous and confidential. Furthermore, it is my understanding I will be given the opportunity to examine the notes from our interview to ensure that they accurately reflect my beliefs and that I will be contacted in advance to give my permission if any statements I make are to be quoted in the final report of the study.

Please call me at school (xxx xxxx) or home (phone no.__________________) to arrange an interview time.

PLEASE DETACH THIS MEMO FROM THE QUESTIONNAIRE AND RETURN IT, UNDER SEPARATE COVER, TO _____________________________ IN THE MAIN OFFICE.

## DISSERTATION VALIDATION LETTER: SCHOOL PERSONNEL

January 10, 1992

To the Teachers of

It's been two long years since I had the opportunity of involving you in my graduate research project on the implementation of the new high school graduation requirements. I have finally reached the stage where the writing is almost complete and I am ready to share the results with you.

Several of the department heads and administrators consented to be interviewed for my study while the remainder of the staff answered a questionnaire about their perceptions of the implementation process. Chapter 5 of my dissertation deals with perceptions of the new graduation requirements from the school perspective. Because the chapter is very long, I have not prepared copies for each teacher. Alternatively, I have left three copies with the head secretary and would ask you to review the contents, ensure that I have quoted you accurately, and note any discrepancies between my interpretation of events and your understanding of them. Please note your comments right on the document. Would it be possible for you to review this chapter by January 24th? I am now working to deadlines for spring convocation.

For your agreement to participate in this study, I promised that I would maintain the anonymity of people, places and participants. I have tried to honor my promise and by avoiding the use of specific names. In addition, pseudonyms have been adopted for the school and the district. They will be changed once again in the final draft to further protect the identity of the school.

Briefly, the results of my study show that the implementation was wrought with problems. In spite of the fact that the department consulted with stakeholders about the change in graduation requirements, they did not seem to listen to input from educators and consequently several concepts within the new requirements were challenged. This has led to restructuring of several components of the new standards including the "C" options, and the science program. The entire issue relating to the dual diploma requirement is in fact currently under reconsideration and it is likely that we will be returning to a single diploma structure in the near future.

I want to thank you very much for participating in my study by sharing your understanding of the new graduation requirements with me. The information you shared was very useful in helping me to document the evolution of events in the implementation process.

Yours truly

Sharon Pisesky

Sharon Pisesky

# APPENDIX C

## SCHOOL LEVEL:
## STUDENT QUESTIONNAIRE

# STUDENT QUESTIONNAIRE COVERING LETTER

Faculty of Education
Department of Educational Administration Letterhead

Date

Dear student,

As a graduate student in the Department of Educational Administration I am conducting research into the high school graduation requirements as a component of the 1985 Secondary Education Policy in Alberta. The purpose of this study is to investigate how these mandated changes are being implemented in Alberta high schools. Your cooperation in sharing your insights, experiences and beliefs about the impact of the resulting changes will contribute to our understanding of the implementation of this policy and assist me to complete the requirements for my Ph. D. in educational administration.

Although your participation in this study is voluntary, I am requesting all students in the CALM classes at ________________ to assist me by completing the attached questionnaire. Your participation will ensure that the data collected are both accurate and complete. Please complete the questionnaire and return it to me or your CALM teacher by the end of the week.

Every effort has been made to guarantee participants anonymity. No names or signatures are required and no codes for tracing participation have been used on the questionnaire. Data in the final report will be reported anonymously and all responses will be treated confidentially.

If you have any questions or concerns I would welcome your call. A copy of the final report will be made available to the school upon its completion. Thank you for your cooperation.

Sincerely

Sharon Pisesky
Phone: 436 4888 (residence)
492 3094 (university)

# SAMPLE OF STUDENT QUESTIONNAIRE
# ON
# HIGH SCHOOL GRADUATION REQUIREMENTS
# IN ALBERTA

As a doctoral candidate in the Department of Educational Administration at the University of Alberta, I am conducting research into the new high school graduation requirements. The purpose of this study is to investigate the effect of the new regulations on education in Alberta. Your cooperation in answering this questionnaire honestly and openly will help me to achieve the goals of this study and provide the school system and Alberta Education with important information and understandings about how the new high school diploma requirements policy is being implemented.

1. This questionnaire is being completed by

    1 _____Grade 10 student

    2 _____Grade 11 student

    3 _____Grade 12 student

2. I am

    1 _____male

    2_____female

3. What do you plan to do following high school?

    1 _____attend technical/trade school

    2 _____attend community college

    3 _____attend university

    4 _____work

    5 _____other, what?____________________________________

    6 _____undecided

4. How many years are you planning to spend in high school?

    1 _____3 years

    2 _____3 and a half years

    3 _____4 years

    4 _____more than 4 years

5. Which high school diploma program are you enrolled in at the present time?

    1 _____general

    2 _____advanced

    3 _____other, please indicate which?________________________________

6. How did you decide which diploma program to enroll in? Check one or more.

_____my friends were taking it

_____wanted the best diploma for finding a good job

_____wanted the best diploma to get me into college, technical school or university

_____guidance counsellor advised it

_____teacher advised it

_____the principal or assistant principal advised it

_____parents advised it

_____allowed me the most choices of courses I wanted to take

_____gave me the most flexibility when I finish high school

_____gave me the greatest academic opportunities

_____other, please explain

7. How well do you understand the course requirements and credits you need to complete each of the high school graduation diplomas?

a. The Advanced Diploma:

1 _____understand them all very well

2 _____understand the requirements somewhat

3 _____not well enough to be sure I am enrolling in the right courses

4 _____not at all: I need more information.

b. The General Diploma:

1 _____understand them all very well

2 _____understand the requirements somewhat

3 _____not well enough to be sure I am enrolling in the right courses

4 _____not at all: I need more information.

8. Based on your current marks and credits earned to date, do you expect to be able to complete all of the requirements for the diploma stated in Question 3?

1 _____yes

2 _____uncertain

3 _____no

If uncertain, or no, please explain. Use the reverse side if necessary.

9. Most students take either the General or Advanced Diploma programs. In the next series of questions, please give your opinion about the difference between the two diplomas. If you do not think there is any difference, please say so. If you need additional space, please use the other side.

a. How do the diplomas differ in terms of difficulty or standards?

b. How do the diplomas differ in terms of courses students are allowed to select?

c. How do the diplomas differ in terms of entrance requirements for university, NAIT, Grant MacEwan, etc?

d. How do you think the differences in the diplomas will affect a student's future job opportunities?

e. Does the diploma program a student is enrolled in make any difference in how he/she is treated in the school?

f. Are there any other important differences between the General and Advanced Diplomas? Please explain.

10. When you registered for this school year, were you able to take all the courses you wanted?

1 _____yes

2 _____no, If no, which course(s) you were not able to take

Why were you not able to take these courses?

_____no more room in my timetable

_____courses were full

_____courses were not offered this year

_____lacked passing grade of 50%

_____other, please explain

11. Are there other courses you would like to take if you could fit them into your program?

1 _____no

2 _____yes. What courses would you like to take? (Please list)

12. How did you learn about the new graduation requirements? Check one or more.

_____read the booklet "A Credit to Yourself"

_____saw the video "A Credit to Yourself"

_____from guidance counsellors

_____from my parents

_____from teachers

_____from principal or assistant principal(s)

_____from brothers, sisters, friends, other students

_____other, please explain .

13. In your opinion should students have the option of earning an Advanced or a General Diploma, or do you think there should be only one diploma for all students?

1 _____two types of diplomas are needed

2 _____one type of diploma is enough

3 _____not sure

Please explain your opinion.

14. Do you feel you need more information about the relationship of your high school program and how it relates to your future?

1 _____no

2 _____yes --What? Please explain.

15. What is your overall reaction to the graduation requirements for the program you are enrolled in?

1 _____I think they are very good

2 _____I think they are generally okay

3 _____I think they need to be changed a little

4 _____I think they need to be changed a lot

5 _____I 'm not sure

16. Are you concerned about the quality of your high school education?

1 _____yes

2 _____no

17. How do you feel about the number of compulsory course credits you must earn to receive your high school diploma?

1._____positive

2 _____negative

3 _____not sure

18. Please share your opinions about the balance between the number of compulsory courses and options (electives) in your high school program.

19. Do you think that there is a relationship between the number of compulsory courses you must take and the quality of your high school education?

1 _____yes

2 _____no

3. _____unsure

20. Do you have any problems or concerns about the high school diploma requirements?

1 _____no

2 _____yes: please share your concern(s).

21. Do you think the high school graduation requirements could be improved?

1 ______no

2 ______not sure

3 ______yes: if yes, how would you improve them? Please give your ideas.

22. Please share any additional information, or ideas you have about the high school graduation requirements. Use the reverse side if necessary.

Thank you for your cooperation in completing this questionnaire.

# APPENDIX D

## SCHOOL LEVEL
## PARENTS' COVERING LETTERS
## AND
## QUESTIONNAIRE

## PARENTS' COVERING LETTER FROM CALM TEACHER

SCHOOL LETTERHEAD

January 12, 1990

Dear Parent or Guardian

Today your son/daughter will be asking you to participate in a research study designed to examine the effects of the new high school graduation requirements. As you know, students who enrolled in high school beginning in September 1988, including your son/daughter, are following a new set of required courses in order to earn their high school diplomas. I am asking for your cooperation in helping us to understand the impact of the new high school diploma requirements. Please take about ten minutes to share your opinions and beliefs about the type of education today's high school students are receiving by completing the enclosed questionnaire.

This research project is a comprehensive study that has the full approved of the _______________ School Board, our principal, _____________, Alberta Education and the University of Alberta. The findings of this study are of particular interest to each of these organizations because it will provide important feedback about the impact of the new graduation requirements.

All of the students enrolled in CALM (Career and Life Management) this semester and their parents, along with all of the teachers and administrators at ________________________________, are being invited to participate in this study. I urge you to become involved and provide your input. Remember, your opinion counts. Please have your son/daughter return the completed questionnaire to school by January 17, 1990.

Thank you for your cooperation with this study.

Sincerely

CALM Teacher

# PARENT/GUARDIAN QUESTIONNAIRE COVERING LETTER

Faculty of Education
Department of Educational Administration Letterhead

January 11, 1990

Dear Parent or Guardian

As a graduate student in the Department of Educational Administration I am conducting research into the high school graduation requirements as a component of the 1985 Secondary Education Policy in Alberta. The purpose of this study is to investigate how these mandated changes are being implemented in Alberta high schools. Your cooperation in sharing your insights, experiences and beliefs about the impact of the resulting changes will contribute to our understanding of the implementation of this policy and and provide Alberta Education and the school system with valuable feedback.

This is a comprehensive study that includes officials from Alberta Education, the Board of Trustees, the central administration of the school system, the school, teachers, students and parents. Parents of students in the CALM classes at ______________ High School are being invited to participate in the study by completing the attached questionnaire. As the parent of a student studying under the new graduation requirements, you are key stakeholder in this policy and your perceptions are especially meaningful to this research. Your cooperation in answering the questions honestly and openly will ensure that the data collected are both accurate and complete. Please return the questionnaire to the school with your son or daughter by January 18.

Every effort will be made to guarantee participants' anonymity. No names or signatures are required and no codes for tracing participation have been used on the questionnaire. Data in the final report will be reported anonymously and all responses will be treated confidentially.

If you have any questions or concerns I would welcome your call. A copy of the final report will be made available to the school upon its completion. Thank you for your cooperation.

Sincerely

Sharon Pisesky
Phone: 436 4888 (residence)
492 3094 (university)

# SAMPLE OF PARENT/GUARDIAN QUESTIONNAIRE
# ON
# HIGH SCHOOL GRADUATION REQUIREMENTS
# IN ALBERTA

As a Doctoral candidate in the Department of Educational Administration at the University of Alberta, I am conducting research into the new high school graduation requirements. The purpose of this study is to investigate the effect of the new regulations on education in Alberta. Your cooperation in answering this questionnaire honestly and openly will help me to achieve the goals of this study and provide the school system and Alberta Education with important information and understandings about the new high school diploma system.

1. This questionnaire is being completed by

    1 _____mother

    2 _____father

    3 _____guardian

2. I am completing this questionnaire for my

    1 _____son who is in grade 10

    2 _____son who is in grade 11

    3 _____son who is in grade 12

    4 _____daughter who is in grade 10

    5 _____daughter who is in grade 11

    6 _____daughter who is in grade 12

3. Do you have other children attending school in Alberta?

    1 _____no

    2 _____yes. If yes, what level are they in?

        1 _____elementary school: grades __________________

        2 _____junior high school: grades__________________

        3._____senior high school:___________________________

4. Have you heard about the changes in the graduation requirements in Alberta?

    1 _____yes (please go on to the next question)

    2 _____no (please skip ahead to question no. 14)

    3 _____not sure (please skip ahead to question no. 14)

5. How did you learn about the new high school diploma programs? Please check as many as apply.

_____newspapers, radio, TV, magazines

_____friends, acquaintances, word of mouth

_____school newsletters, program planning booklet

_____teachers/guidance counsellors

_____school meetings

_____from your children

_____other, what?

6. How much do you know and understand about the new high school diploma requirements?

1 _____almost everything

2 _____enough to give my son/daughter advice

3 _____a little, but not enough to be my child's only advisor

4 _____not very much

5 _____nothing

7. Which of the following statement is closest to your view of the new high school diploma requirements? Check only one.

1 _____you approve completely

2 _____you approve in general, but you have some minor concerns

3 _____you approve somewhat, but you have some major concerns

4 _____you do not approve

5 _____you have not formed an opinion yet

8. How do you feel the new diploma requirements will affect the quality of education in Alberta?

1 _____increase the quality of education

2 _____decrease the quality of education

3 _____no difference in the quality of education

4 _____not sure how the quality of education will be affected

Comments:

9. The next series of questions are related to some of the details of the changes in the new graduation requirements. For each question please indicate if you are in favor, not in favor or have no opinion of the changes. A fourth category allows you to indicate that you are not familiar enough with the changes to comment.

a. What is your opinion of the two-diploma structure: the General Diploma and the Advanced Diploma?

1 _____in favor

2 _____not in favor

3._____no opinion

4 _____not familiar enough with the change to comment

b. What is your opinion of the compulsory course, Career and Life Management, commonly called CALM?

1 _____in favor

2 _____not in favor

3._____no opinion

4 _____not familiar enough with the change to comment

c. What is your opinion about the number of compulsory credits students are required to take?

1 _____in favor

2 _____not in favor

3._____no opinion

4 _____not familiar enough with the change to comment

d. What is your opinion about the balance of credits among the different subjects?

1 _____in favor

2 _____not in favor

3._____no opinion

4 _____not familiar enough with the change to comment

e. What is your opinion about changing the passing grade from 40% to 50%?

1 _____in favor

2 _____not in favor

3._____no opinion

4 _____not familiar enough with the change to comment

f. What is your opinion about the time line for phasing in the changes

1 _____in favor

2 _____not in favor

3._____no opinion

4 _____not familiar enough with the change to comment

10. Are you aware of the changes that have been made in specific subject(s)?

1 _____no. If no, please go on to question 12.

2 _____yes. If Yes, please identify the subject(s) you are referring to:

11. Please give your opinion about the changes which have been made to the subject(s) referred to in question 10.

1 _____in favor

2 _____not in favor

3._____no opinion

4 _____not familiar enough with the change to comment

12. Do you believe that it is the right of all students to earn a high school diploma?

1 _____yes

2 _____no

3 _____uncertain

Comments:

13. Do you have any other comments or feelings about the new graduation requirements that you would like to share? Please use the back if necessary.

The last few questions will assist me to classify your answers for statistical purposes:

14. What age group are you in?

1 _____under 34
2 _____35 to 50
3 _____51 to 65
4 _____65 or over

15. What is your occupation?

1 _____professional
2 _____service, trades, or clerical
3 _____self employed, e.g., business
4 _____homemaker
5 _____unemployed
6 _____other, please indicate?

16. What is your total annual household income (before taxes)?

1 _____less than $25,000
2 _____25,001. - 40,000
3 _____40,001. - 60,000
4 _____over 60,000

Thank you for your cooperation in completing this questionnaire. The information provided will be of great value in assessing the status of the new graduation requirements.

# APPENDIX E

# CONCERNS BASED ADOPTION MODEL (CBAM) DOCUMENTS

## LEVELS OF USE OF THE INNOVATION

Typical Behaviors

| LEVELS OF USE | BEHAVIORAL INDICES OF LEVEL |
|---|---|
| VI. RENEWAL | The user is seeking more effective alternatives to the established use of the innovation. |
| V. INTEGRATION | The user is making deliberate efforts to coordinate with others in using the innovation. |
| IVB. REFINEMENT | The user is making changes to increase outcomes. |
| IVA. ROUTINE | The user is making few or no changes and has an established pattern of use. |
| III. MECHANICAL | The user is using the innovation in a poorly coordinated manner and is making user-oriented change. |
| II. PREPARATION | The user is preparing to use the innovation. |
| I. ORIENTATION | The user is seeking out information about the innovation. |
| O. NONUSE | No action is being taken with respect to the innovation. |

CBAM Project
Research and Development Center for Teacher Education
The University of Texas

## STAGES OF CONCERN

### Typical Expressions of Concern About the Innovation

| STAGES OF CONCERN | EXPRESSIONS OF CONCERN |
|---|---|
| 6. REFOCUSING | I have some ideas about something that would work even better. |
| 5. COLLABORATION | How can I relate what I am doing to what others are doing? |
| 4. CONSEQUENCE | How is my use affecting kids? How can I refine it to have more impact? |
| 3. MANAGEMENT | I seem to be spending all my time getting materials ready. |
| 2. PERSONAL | How will using it affect me? |
| 1. INFORMATIONAL | I would like to know more about it. |
| 0. AWARENESS | I am not concerned about it. |

Adapted from: Shirley M. Hord, William L. Rutherford, Leslie Huling-Austin, and Gene E. Hall. *Taking Charge of Change.* Alexandria, VA: ASCD and Austin, TX: SEDL, 1987.

Questionnaire Item Numbers and Associated Stage of Concern

| Item Number | SoC | Item Number | SoC | Item Number | SoC | Item Number | SoC |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 10 | 5 | 19 | 4 | 28 | 2 |
| 2 | 6 | 11 | 4 | 20 | 6 | 29 | 5 |
| 3 | 0 | 12 | 0 | 21 | 0 | 30 | 0 |
| 4 | 3 | 13 | 2 | 22 | 6 | 31 | 6 |
| 5 | 5 | 14 | 1 | 23 | 0 | 32 | 4 |
| 6 | 1 | 15 | 1 | 24 | 4 | 33 | 2 |
| 7 | 2 | 16 | 3 | 25 | 3 | 34 | 3 |
| 8 | 3 | 17 | 2 | 26 | 1 | 35 | 1 |
| 9 | 6 | 18 | 5 | 27 | 5 | | |

# APPENDIX F

# GRAPHIC REPRESENTATION
# OF
# TEACHERS' STAGES OF CONCERN

Figure F-1

SoC of Faculty According to Teaching Assignment

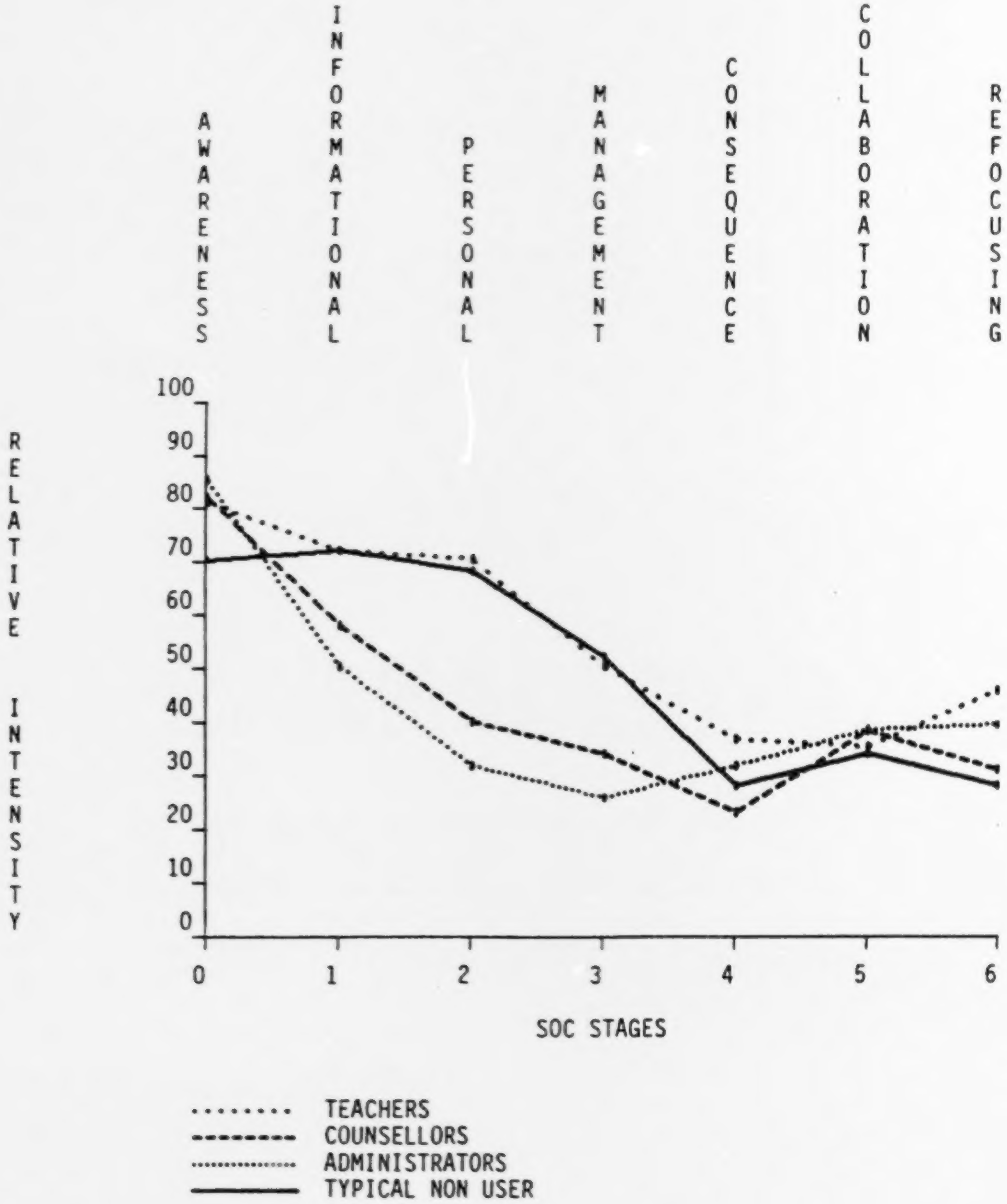


Figure F-2

SoC by Years of Teaching Experience

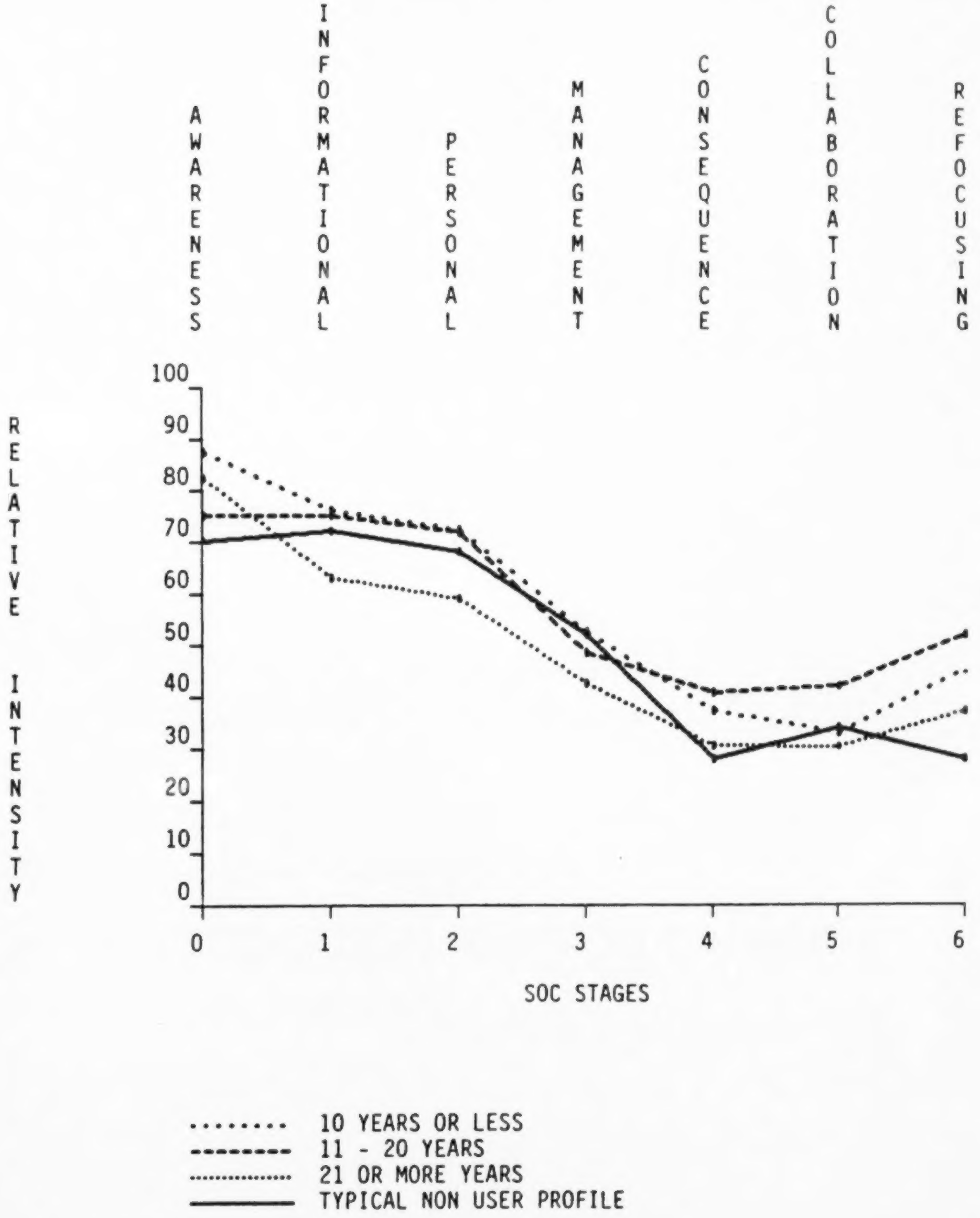


Figure F-3

SoC by Years of High School Teaching Experience

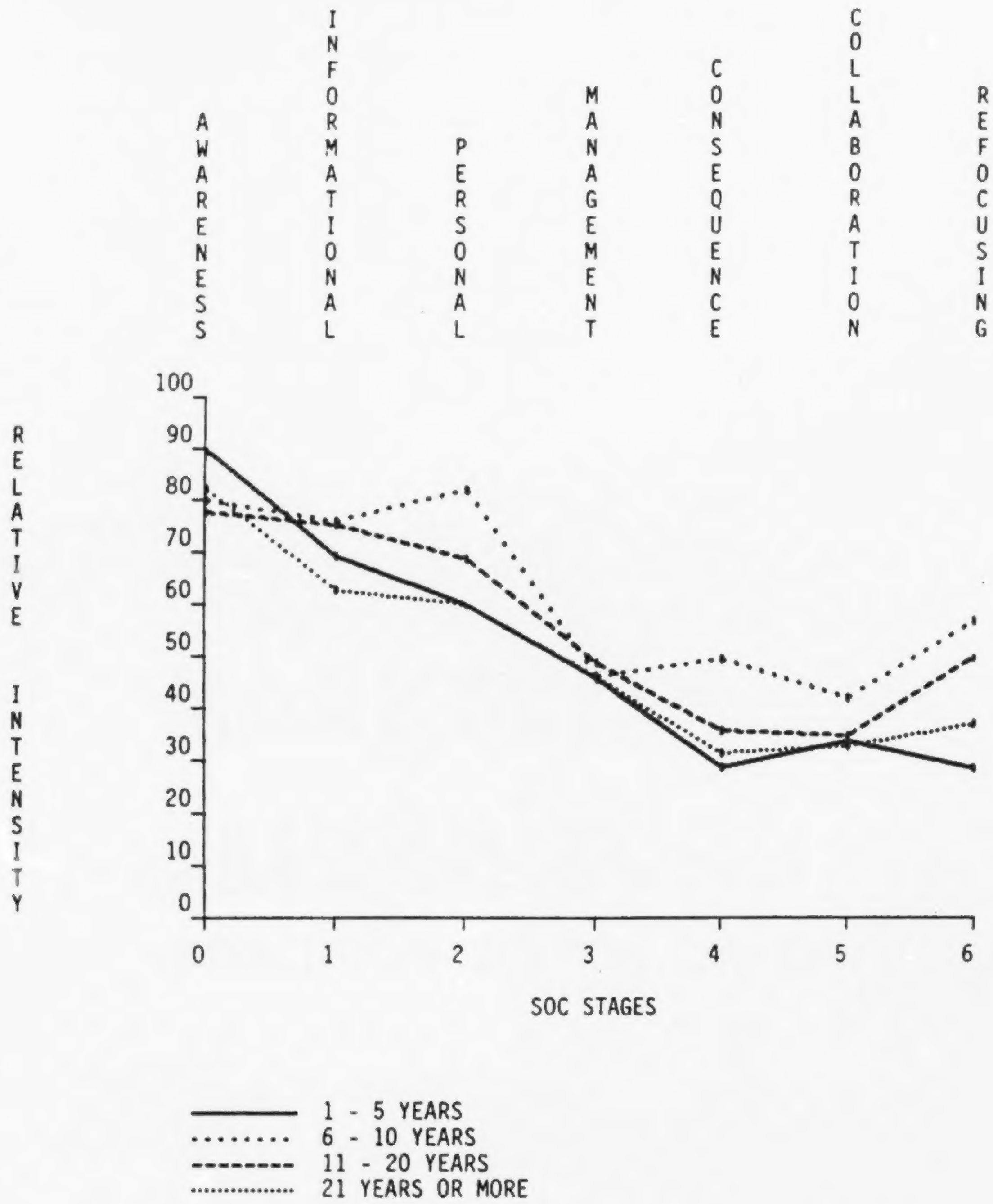


Figure F-4
Teachers' SoC by Subject Taught: Academic Courses

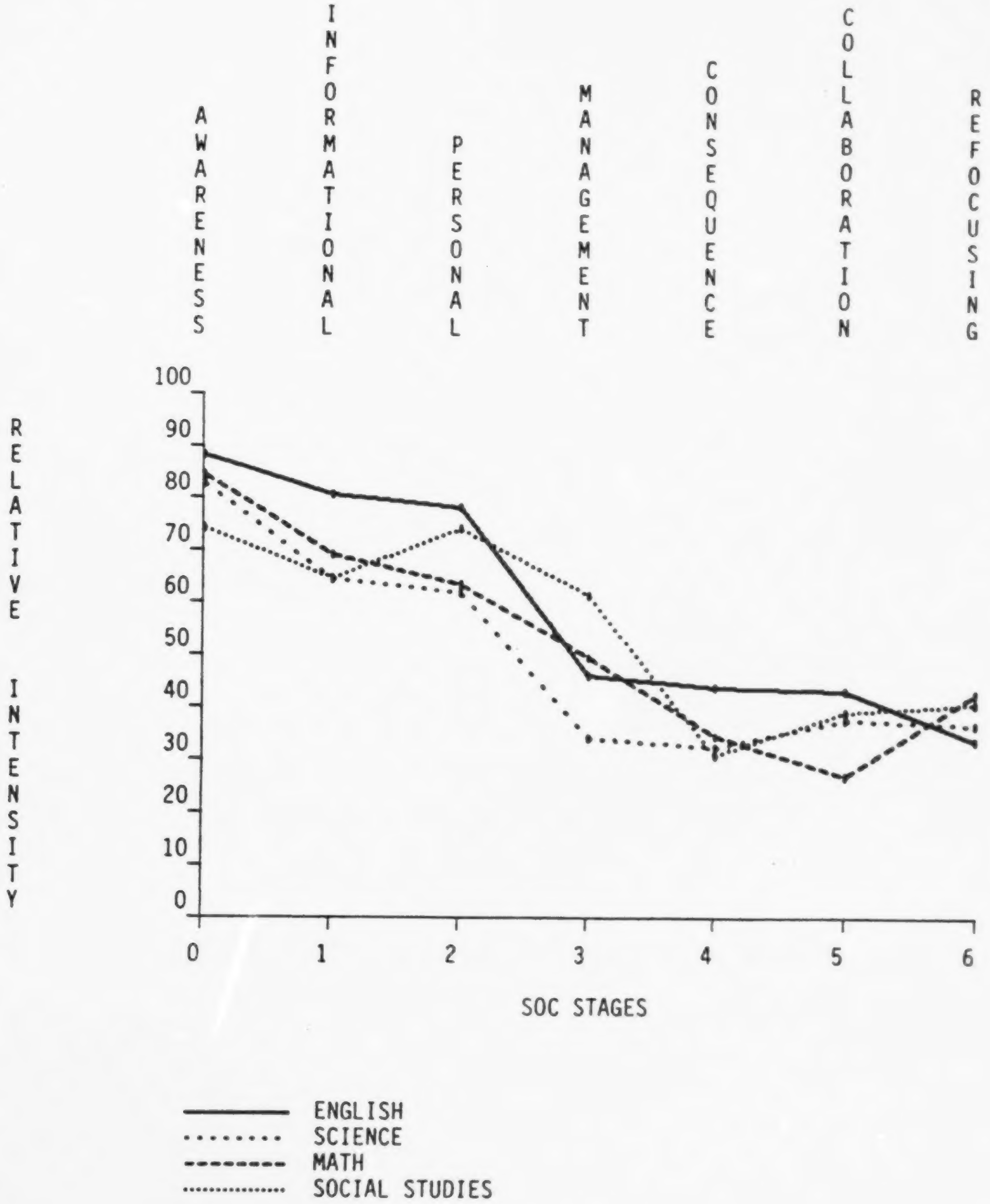


Figure F-5

Teachers' SoC by Subject Taught: Non-Academic Core Courses

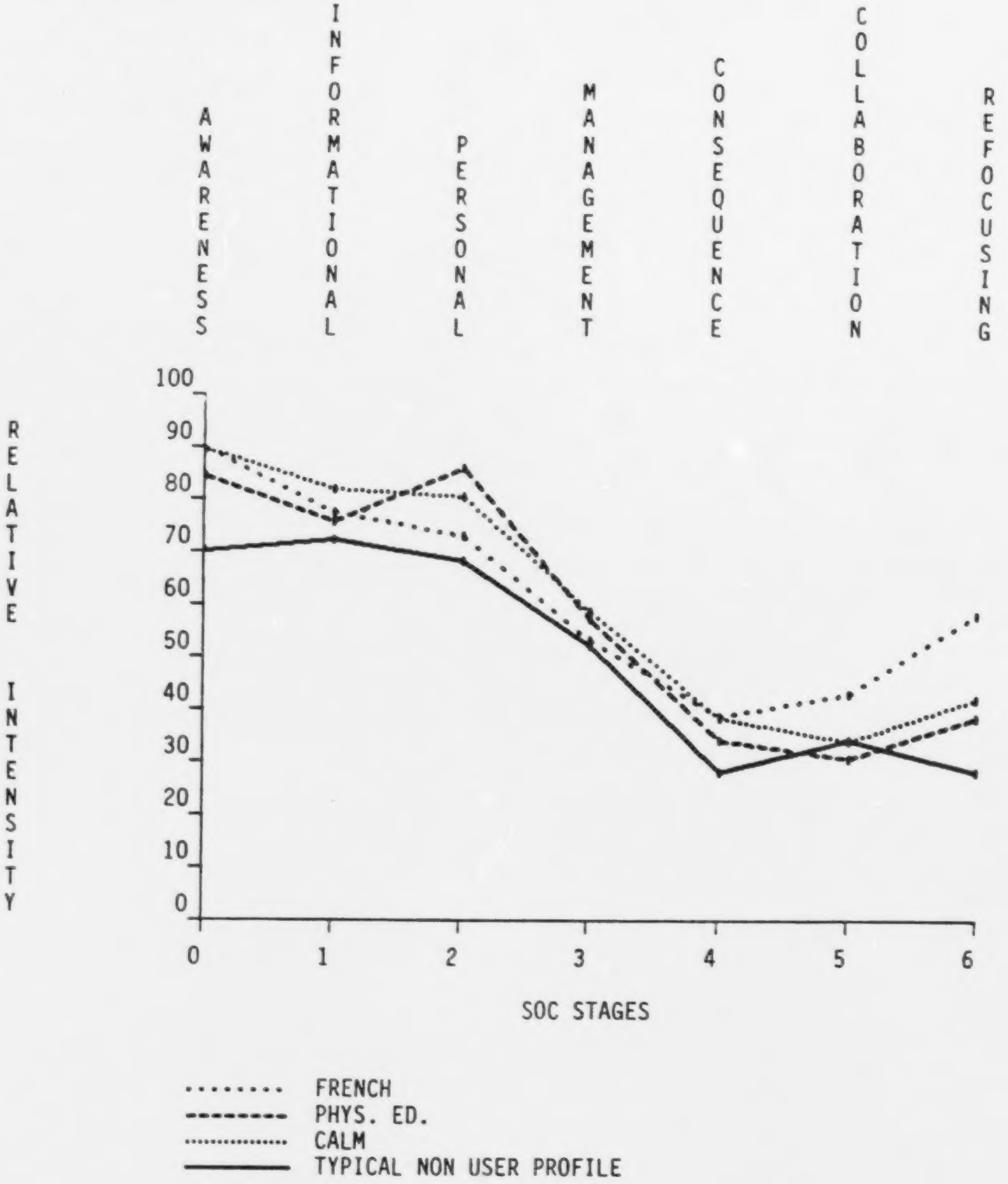
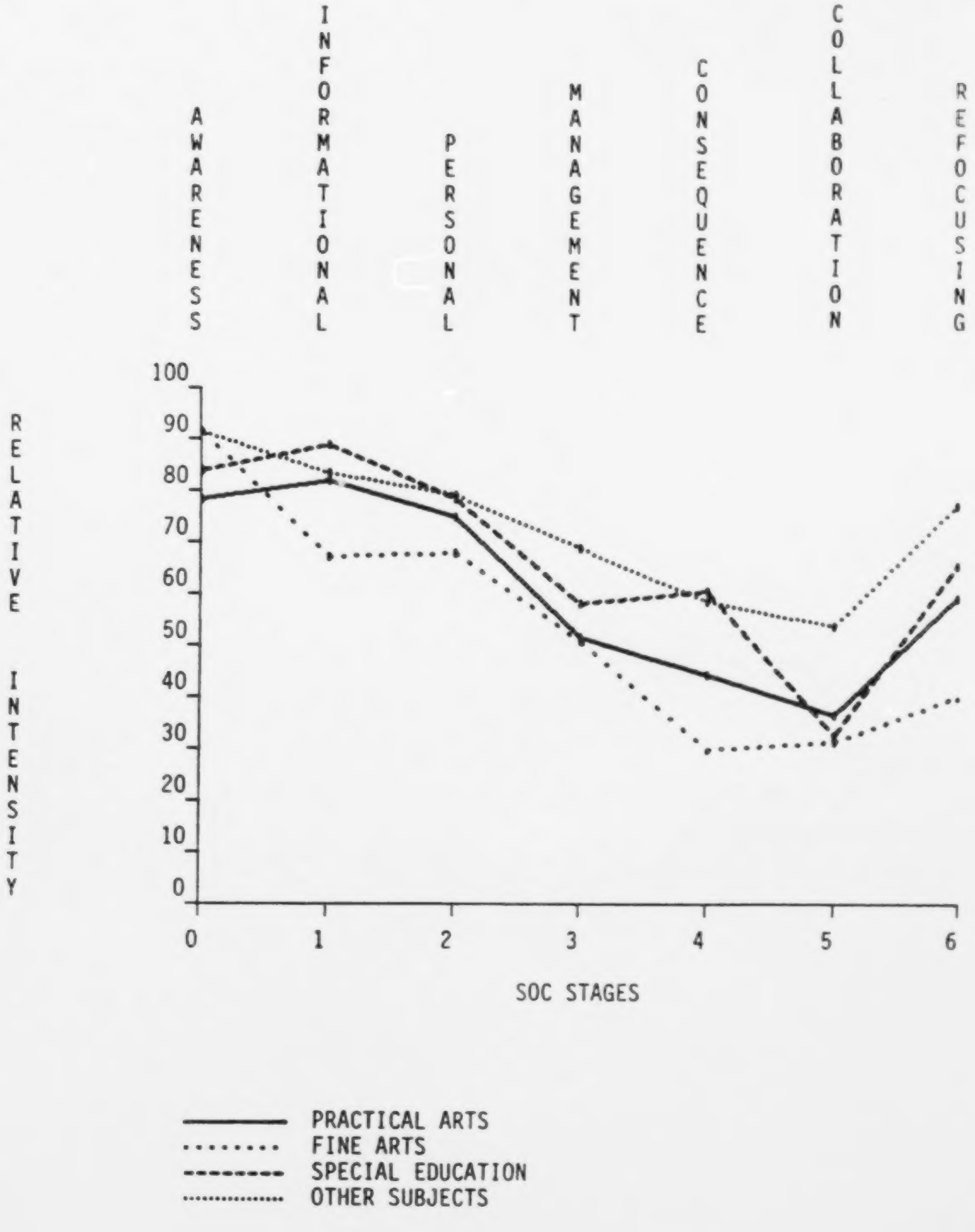


Figure F-6

Teachers' SoC by Subject Taught: Complementary Courses



SHARON PISESKY
11424 32 Avenue
Edmonton, Alberta

April, 1992

## Education

| | |
|---|---|
| 1963 | BSc. (Household Economics), University of Alberta |
| 1964 | P. D. A. D. (Professional Teaching Certificate) |
| 1971 | M. Ed. in Secondary Education.<br>Thesis: *Identification of Curriculum Needs in Home Economics*<br>Committee: Dr. Edith Down (Supervisor), Dr. E. L. Empey, Dr. Heidi Kass |
| July 1988 | Ph. D. Student, Department of Educational Administration |
| Fall 1989 | Ph. D. Candidate, Department of Educational Administration |

## Professional Experience

| | |
|---|---|
| 1965-69 | Teaching Assistant: Joint appointment of the Faculties of Home Economics and Education (Part-time) |
| 1969-73 | High School teacher: Edmonton Catholic Schools. Home Economics, Art and Student Activities Coordinator |
| 1973-74 | Secondment to Faculty of Education as sessional instructor (Teaching C. & I. Courses in Home Economics Education) |
| 1974-79 | Joint assignment: .5 Home Economics Consultant, and .5 Home Economics teacher, Edmonton Catholic School District |
| 1979-88 | Supervisor, Practical Arts, Edmonton Catholic School District (responsible for Home Economics, Business Education and some Vocational Education programs). |
| January-June 1989 | Program Consultant, St. Joseph Composite High School, Edmonton |
| Fall 1990 | Program Consultant, Alternative Program Delivery for High Schools and Career and Technology Studies, Edmonton Catholic School District |

## Publications

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| 1977 | Textbook co-authored with Edith Down: *What's to Eat* (Copp Clark Pitman) followed by supplementary teacher and student resource materials in 1978. Recommended basic resource for junior high school home economics in 7 Canadian provinces; translated into French; Published in Canada, Great Britain, the US, and Australia. |

## Awards:

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| 1988 | Ruth Binnie Award, Canadian Home Economics Association |
| 1989 | Province of Alberta Dissertation Fellowship |
| 1989 | Edmonton Catholic School District Sabbatical Award |

## Highlights of Professional Offices Held:

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| 1974-75 | Provincial President, Home Economics Specialist Council, Alberta Teachers' Association |
| 1980-81 | President, Alberta Home Economics Association |
| 1982 | Co-Chairman, Canadian Home Economics Association Convention |
| 1982-83 | President, Edmonton Catholic Administrators' Association |
| 1982-85 | Professional Representative to the Faculty of Home Economics Council, University of Alberta |

## Highlights of Public Service:

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| 1980-82 | Canadian Council on Multiculturalism, Public appointee |
| 1983-89 | Trustee, Edmonton Public Library Board<br>(Chairman: 1987, 1988) |
| 1984-91 | Trustee, Board of Administrators, Newman Theological College |
| 1987 - | Board of Directors, Legal Resource Centre, Faculty of Extension<br>1992: President, Legal Resource Centre |